

## Board Independence, Voluntary Disclosure, and the Cost of Equity Capital

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### ABSTRACT

This study examines how a firm's corporate governance relates to the cost of equity capital. This research utilizes two pillars of corporate governance: independency as proxied by board independence, and transparency as proxied by voluntary disclosure. Within the context of this research, board independence is measured using the score of board and audit committee independence. Voluntary disclosure is measured using the score of voluntary disclosure published in the firm's annual report during the period of the study. Meanwhile, the cost of equity capital is measured using CAPM. This study employs regression analysis with the sample of 104 listed Indonesian manufacturing companies during the period of 2009-2012. The result shows that there is no relationship between board independence and cost of equity capital. On the other hands the result shows that there is a significant relationship between voluntary disclosure and firm's cost of equity capital. The findings imply that investor uses voluntary disclosure as additional information to complete their consideration. With the voluntary disclosure in their consideration, investors therefore willing to lower their required return (i.e. lower cost of equity capital). This finding is consistent with the argument that corporate governance limits opportunism and motivates managers to choose accounting policy and thereby aligning the interest of the firm and its shareholder.

Keywords: cost of equity capital, corporate governance, board independence, voluntary disclosure.

### 1. INTRODUCTION

This study aims to examine the effect of board independence and voluntary disclosure on the cost of equity capital. In this study, the board independence is terminology used to explain the independence of the Board of Commissioners and the independence of the Audit Committee as a whole. Voluntary disclosure in this study is financial information published voluntarily by a company and beyond the mandatory financial information (Setiany et al., 2017). Meanwhile, the cost of equity capital in this study is measured using Capital Asset Pricing Model (CAPM). Furthermore, the cost of equity capital in this study describes two sides. On the firm side the cost of equity capital is the cost for the company to obtain external funding. On the investor's side, the cost of equity capital is the required return or the expected return of an investment.

In the Indonesian context, this research is based on the phenomenon of high cost of equity capital in Indonesia compared to other ASEAN countries. The Chairman of the Business Competition Supervisory Commission (KPPU) Syarkawi complains about the high cost of equity capital in Indonesia, if this continues to happen, at the end of 2015 when facing the ASEAN Economic Community, Indonesian entrepreneurs will have trouble in facing businessmen from another country because from cost of capital point of view, they already bear high costs, "(CNN Indonesia, July 29, 2015 / [www.cnnindonesia.com](http://www.cnnindonesia.com))

A research on Asian Capital Market Development and Integration by Asian Development Bank and Korea Capital Market Institute (2014) shows that the level of cost of equity capital of Indonesian corporations bears the highest cost of equity capital compared to a number of ASEAN countries during 2000-2012. This indicates the high risk that investors anticipate when investing in companies in Indonesia. Their results also show high standard deviation of data in Indonesia. The high standard deviation value means that the cost of equity capital of Indonesian companies varies greatly between very high and very low, and is not close to the average value.

The problem of high cost of equity capital can be overcome by implementing Corporate Governance. This is in accordance with the statement of the Forum for Corporate Governance in Indonesia (FCGI, 2000) that one of the benefits of implementing Corporate Governance is to lower the cost of equity capital. Corporate Governance began to be regulated in Indonesia in 2004 with the establishment of the National Committee on Governance Policy (KNKG) on 30 November 2004.

However, the results of the Asian Development Bank and Korea Capital Market Institute (2014) research above also show a high standard deviation value. This value indicates that although some companies have enjoyed low cost of equity capitals, there are companies which still have high cost of equity capitals. This means that the benefit from requiring companies to implement Corporate Governance is not optimal. This phenomenon requires scientific explanation and gives opportunity to optimize the benefits of Corporate Governance implementation for companies in Indonesia. Therefore, this study begins with a review of previous research to determine the factors that affect the cost of equity capital.

Research on the cost of equity capital has been conducted frequently in the past. Researchers have attributed the cost of equity capital to various factors, including firm characteristics (Botosan, Plumlee, and Wen, 2011), information asymmetry (Francis, LaFond, Olsson, and Schipper, 2004; Leuz and Verrecchia, 2000; Hail and Leuz, 2006). This study based its testing on the argument that the implementation of Corporate Governance is a form of monitoring mechanism for agency conflict. This is because managers and investors tend to maximize their own interest (utility maximizer) (Jensen and Meckling, 1976).

Jensen and Meckling (1976) explain that there are three types of sacrifices (agency costs) to overcome the agency conflict: "monitoring of expenditure by principal, bonding by agent, and residual loss". This research focuses on one of the monitoring types. The implementation of monitoring to resolve conflicts requires investor's confidence that manager's behavior can be changed from selfishness to conform to investors' interest. This confidence, according to Jensen and Meckling (1976) is obtained from the clarity in the contract that allows monitoring by principals.

In its development, monitoring is regulated through regulation which demands the implementation of Corporate Governance by companies. Thus, today monitoring implemented by companies no longer need clear contract (without ambiguity) regarding investor's right to control and limit manager's behavior as described by Jensen Meckling (1976). Both monitoring based on the needs of investors or monitoring based on regulations has the same goal, to find conformity between principal's interest and agent's interest. However, it is interesting to study

the effect of regulation regarding monitoring in resolving agency conflict as explained by Jensen and Meckling (1976).

Agency theory is related to the conflict between the principal and the agent. Referring to Scott's (2012) statement, the application of agency theory in this research is used to explain the conflict of interest between managers and other internal parties (as agents) with the investor (external investor as principal). The information asymmetry that occurs between the two parties can be overcome by monitoring managers, so that the behavior of managers can be changed. The changes in manager's behavior as a result of monitoring affects management discretion in accounting policies, thus improving the quality of corporate profits. The company's published earnings information is used by investors to calculate the expected level of cost of equity capital, thus the quality of company's published profit quality determines the level of the firm

Previous researches to prove that board independence affects the cost of equity capital, among others are conducted by Asbaugh et al. (2004), Lombardo and Pagano (2002), and Anderson et al. (2004). Research on the effect of voluntary disclosure on the cost of equity capitals among others, are conducted by Botosan (1997), Diamond and Verrechia (1991), Botosan and Plumlee (2002), Lang and Lundholm (2000), Lambert et al. (2006), Francis, Khurana, and Pereira (2005), Gulo (2000), Gao (2010), Dhaliwal et al. (2011), and DeBoskey and Gillett (2013).

However, we have not found research on the mediating role of earnings quality. Although there have been previous studies linking Corporate Governance to earnings quality using board's independence as proxy (Felo, Krishnamurthy, and Solieri, 2003; Bryan, Liu, and Tiras, 2004; Klein, 2006; Larcker, Richardson, and Tuna, 2007; Shah, Butt, and Hasan, 2009), and voluntary disclosure (Dhaliwal, Naiker, and Navissi, 2007; Sarikhani and Ebrahimi, 2011; Roychowdhury and Sletten, 2012).

This research problem further motivates researchers to explain the relationship of board independence, voluntary disclosure, and cost of equity capitals through mediation mechanisms. Based on previous research and research motivation, the research questions are formulated as follows.

1. Does board independence affect the cost of equity capital?
2. Does voluntary disclosure affect the cost of equity capital?

## **2. LITERATURE REVIEW**

### **2.1. The Influence of Board Independence on Cost of Equity Capital**

The agency theory in this study is related to the conflict between managers and investors who both want to maximize their respective profits (Jensen and Meckling, 1976). Monitoring is one solution to resolve the conflict. Monitoring within the framework of Corporate Governance is required to protect the interests of investors. A well-performing board will be viewed by investors as having the ability to protect their investments and ensuring equal treatment with other shareholders, thereby reducing investment risk. Therefore investors are willing to lower their required investment return (low cost of equity capital). Effective boards are not only capable of performing the above functions so as to lower the Information asymmetry between the two parties, which ultimately increases investor confidence, so that investors are willing to decrease the required return on investment (low cost equity capital).

Within the agency theory framework, board independence is central because it is expected to provide control over the manager's tendency to act opportunistically. Such independence is expected to negate the possibility of partially and not neutral in the controlling function. According to Li, Moshirian, Pham, and Zein (2007) Board of Commissioners is an instrument for internal control of Corporate Governance. Similar opinion is expressed by Fama and Jensen (1983) that the independence of the Board of Commissioners can improve its

effectiveness in carrying out its main functions, overseeing company management performed by management.

Lombardo and Pagano (2002) state that better implementation of Corporate Governance will result in lower equity costs. This is because investors no longer need to pay monitoring fees for verification of information issued by management. Therefore, the implementation of Corporate Governance through the supervision of the Board of Commissioners will lower the cost of equity capital. The separation of roles between principals and agents has led to information asymmetry between the two which has a potency to harm principals when agents have a tendency to behave opportunistically (Jensen and Meckling, 1976). The opinion of Jensen and Meckling (1976) emphasizes the important role of the Board of Commissioners and other committees that assist the board to oversight the management.

Research conducted by Ashbaugh et al. (2004) proves that the independence of Audit Committee members influences the cost of equity capital. While research conducted by Anderson et al. (2004) proves that the independence of Audit Committee members also influences lower cost of capital. This research is conducted to reexamine the relationship between board independence and cost of capital. This study therefore suggests that the higher level of board independence will reduce the cost of equity capital. The research hypothesis is formulated as follows:

H1: Board independence negatively affects the cost of the company's equity capital.

## **2.2. Voluntary Disclosure and Cost of Equity Capital**

Adequate monitoring is expected to resolve conflicts between managers and investors (Jensen and Meckling, 1976). This problem arises from the information asymmetry between the two parties. Managers have more information about their performance and future prospects. This problem may cause rational investors to make wrong decision when they decide to invest in the market with asymmetry information (Scott, 2012).

OECD (2004) states that a strong disclosure policy is one of the expected monitoring forms that are useful as a basis of adequate information for investment decision making by investors. In this study, the disclosure studied is voluntary disclosure. The increase in disclosures expected by minority shareholders may reduce the asymmetry of the information has negative consequences to bear. Thus the implementation of Corporate Governance is expected to ensure the transparency of corporate financial information. As Jensen and Meckling (1976) argue, that reliable financial information can reduce information asymmetry, increase investor confidence, increase share prices, and reduce the cost of corporate equity. Lombardo and Pagano (2002) also state that the implementation of Corporate Governance will result in cheaper equity costs.

This is because the cost of the disclosure presented by the company becomes the responsibility of the principal. This condition can also result in reluctance of management and majority shareholders to disclose voluntary financial information to minority shareholders because of the potential to increase the cost of capital (Shleifer and Vishny, 1997). Nevertheless, the benefits of voluntary disclosure are also enjoyed by majority shareholders over other parties in the form of a decrease in the cost of equity capital (Botosan, 1997, Lang and Lundholm, 2000). This opinion means that the high or low cost of equity capital is also affected by company's voluntary disclosure.

Previous researches discussing the effect of disclosures on cost of equity capitals are: Botosan (2006), Diamond and Verrechia (1991), Botosan and Plumee (2002), Lang and Lundholm (2000), and Lambert et al. (2006), which conclude that voluntary disclosure has an effect on lowering the cost of equity capital. Research conducted by Francis et al. (2005)

concludes that the level of voluntary disclosure significantly affects cost of equity capitals, with different sample groups.

Based on the above description, a similar study is still needed to examine the effect of voluntary disclosure on the cost of equity capital. So in this study we suspect that voluntary disclosure has an effect on reducing the cost of equity capital. The research hypothesis is formulated as follows:

H2: Voluntary disclosure negatively affects the cost of the company's equity capital.

### **3. RESEARCH METHOD**

#### **3.1 Population and Sample**

This study uses secondary data in the form of financial statements and annual reports issued by companies listed in Indonesia Stock Exchange (IDX), and other public information sources such as ICMD (Indonesian Capital Market Directory). The sample selection process starts with the setting of sample frame. Sample frame is a physical representation of population element used as the sample source (Sekaran and Bougie, 2013). The sample frame of this study is the annual report submitted to IDX by the sampled companies as representation of all manufacturing companies in Indonesia, which is the population of this study.

The sample of this study is manufacturing company listed in IDX during the period of 2009-2012 with a total of 120 companies. The sample is selected according to certain criteria (purposive sampling) so that the sample is the representative of the population. The criteria for sample selection are as follows:

1. Manufacturing companies listed in IDX and ICMD during the period of 2009-2012. The selection of one type of industry is based on the research conducted by Botosan (1997) which states that every industry has a different disclosure pattern, so research on disclosure should be conducted in each industry.
2. Publishes a full annual report during the period of 2009-2012 and presents the background of the members of Board of Commissioners, Audit Committee, and Board of Directors, including the explanation of independence and history of previous work experience. This information is needed to measure the independent variables of this study.

The period of this study is limited until 2012 because in 2011 the government issued a new regulation that Bapepam-LK as the capital market supervisor in Indonesia was replaced by the Financial Services Authority (OJK). OJK is established based on the Law number 21 of 2011 and starts effective on January 1, 2013.

### **4. RESULTS AND DISCUSSION**

#### **4.1. Analysis Results**

Testing on the influence of board independence and voluntary disclosure on cost of equity capital is conducted using regression analysis. The result of regression analysis is presented in Table 1 which shows the coefficient of determination (adjusted R<sup>2</sup>) of this research model is 0.146 or 14.6%. This means that the independent variables in this research explain 14.6% of variation in dependent variable, while the rest is influenced by other variable not examined in this research model. The goodness of fit of this model is indicated by the significance value of Prob (F-statistic) of 0.000 below 5%.

The first hypothesis of this study suggests that board independence negatively affects the cost of equity capital, as measured by CAPM. Based on the result of regression in Table 1, we can see that board independence has significant effect on the cost of equity capital. The results of the tests show that there is a significant influence of board independence on the cost of equity capital. This result shows the  $\beta_1$  coefficient of -0.048 with a significance level ( $p$ -value) of

0.643; above 0.05. Thus, board independence has no effect on the cost of equity capital. This means hypothesis 1 (H1) is not supported.

Table 1  
Results of Regression Analysis

| Variable                  | Expected Result | Coefficient | ρ-value   |
|---------------------------|-----------------|-------------|-----------|
| <i>Intercept</i>          |                 | 0.139       | 0.294     |
| INDP                      | -               | -0.048      | 0.643     |
| DISC                      | -               | -0.300      | 0.011 **  |
| TA                        | -               | 0.026       | 0.017 **  |
| Yr_2010                   |                 | -0.011      | 0.627     |
| Yr_2011                   |                 | -0.059      | 0.006 *** |
| Yr_2012                   |                 | -0.149      | 0.000 *** |
| <i>Adj. R<sup>2</sup></i> |                 | 0.146       |           |
| <i>F-Statistic</i>        |                 | 10.164      | 0.000     |
| N                         |                 | 323         |           |

\*, \*\*, \*\*\* shows significant at 10%, 5%, and 1% respectively

$$\text{COEC} = \beta_0 + \beta_1 \text{INDP} + \beta_2 \text{DISC} + \beta_3 \text{TA} + \beta_{4-6} \text{Dummy for year} + \varepsilon(1),$$

Variables:

COEC: Cost of equity capital, measured using CAPM (Sharpe, 1964; and Lintner, 1965),  
 INDP: Independent *board*, measured using combined score of Board of Commissioners independence, and audit committee independence,  
 DISC : Voluntary disclosure, measured using score of voluntary financial disclosure,  
 TA : Total asset, measured using logarithm of total assets, and  
 Yr\_2010, 2011, 2012 : *Dummy* year, measured by assigning 1 for the corresponding year, 0 otherwise.

The results of the second hypothesis testing in this study regarding the effect of voluntary disclosure indicate that there is significant influence on the level of cost of equity capital. The result of regression analysis shows that the coefficient of  $\beta_2$  is -0.300, with value of significance ( $\rho$ -value) of 0.011, above 0.05. Thus, based on Table 1 above the research hypothesis 2 is supported

In Table 1 the effect of control variable total asset and dummy year on capital equity cost are also presented. The test results show that there is a positive effect of total assets on the cost of equity capital with  $\beta_3$  coefficient of 0.026. The significance level  $\rho$  value of 0.017 under 0.05.

The dummy control variable of year represents the 2009-2012 year, with the base year being 2009. The tests are conducted with three dummies other than the base year, dummy in 2010, 2011, and 2012. Dummy testing in 2010 showed no effect on the cost of equity capital. It can be seen in Table 1 Model (1) above that the coefficient  $\beta_4$  of -0.011 which is not significant with  $\rho$  value of 0.627.

Dummy in 2011 showed an influence on cost of equity capitals seen from the coefficient  $\beta_5$  of -0.059 proved significant with  $\rho$  value of 0.006. The significant effect means that the average cost of equity capital in 2011 is 0.059% lower than the average equity cost of capital in 2009. Dummy in 2012 also shows the influence of year (time) on the cost of equity capital. This can be seen from the coefficient  $\beta_6$  of -0.149 proved significant with  $\rho$  value of 0.000. The effect means that the average cost of equity capital in 2012 is 0.149% lower than the average cost of equity capital in 2009.

## 4.2. Discussion

### 4.2.1. Effect of Board Independence on Cost of Equity Capital

Monitoring within the framework of Corporate Governance is based on regulation that must be obeyed. Thus this mandatory monitoring no longer requires a clear contract (without ambiguity) regarding investor's right to monitor and to limit manager behavior as explained by Jensen and Meckling (1976). Although the purpose of both monitoring is the same; promoting conformity of principal and agents interest.

The testing on the influence of board independence level on cost of equity capital in this research does not provide evidence for the hypothesis. This result suggests that board independence has an effect on the cost of equity capital is not supported by this research data. The increase in board independence is not a factor that directly affects the cost of equity capital. Thus the results of this study did not succeed in proving that the company can benefit from the decrease of cost of equity through increasing board independence.

The data of board independence growth and cost of equity capital indicates that the company still shows a tendency to increase board independence in the study period. This demonstrates the need to oversee company's accounting and reporting system, given the high investment risk borne by investors in the research period adjacent to the crisis. Companies need to provide investment security guarantees to keep investors willing to invest.

The results of this study are not in line with the opinion that the higher level of board independence has a role in reducing investment risk (Ashbaugh et al., 2004; La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2000). Thus the results of this study do not support Anderson et al. (2004), Ashbaugh et al. (2004), Fields et al. (2011) who proves that independence negatively affects the cost of equity capital. The results of this study indicate that increased board independence is not a factor that affects the cost of equity capital of a company.

The unfounded influence of board independence indicates that monitoring does not necessarily affect the cost of equity capital. As stated by Cristie and Zimmerman (1991) that, *"If there are sufficient controls on manager's discretion (e.g., monitoring by the board of directors, ....), then manager will make ex post accounting choices to maximize the value of the firm ....."*

The opinion of Cristie and Zimmerman (1991) emphasizes that the influence of monitoring affects manager's behavior in managing corporate finance before creating the conformity between principal's objective and manager's objective which will encourage managers to choose accounting policies that increase the value of the company (in this study means low cost of equity capital firms).

### 4.2.2. The Effect of Voluntary Disclosure on the Level of Cost of Equity Capital.

The level of voluntary disclosure in this study is proved to negatively affect the cost of equity capital. Increased voluntary disclosure published by a company provides additional information to investors about the company. As a result, investors gain a better understanding of corporate management. This condition causes investors to be willing to lower the level of risk that they anticipated. Because of the lower risk level, investors are willing to lower the required return rate to invest. Thus, company enjoys a lower cost of equity capital.

Increased voluntary disclosure is performed in order to provide investment security assurance, as well as company's efforts to lower the level of risk borne by investors. Companies need to provide investment security guarantees to keep investors willing to invest. This is because investors who avoid risk generally do not invest in companies that they do not

understand (Merton, 1987), so the company expects that increased transparency will attract investment.

The results of this test is in line with Botosan (1997), Diamond and Verrechia (1991), Botosan and Plumee (2002), Lang and Lundhom (2000), and Lambert et al. (2006) who proves that voluntary disclosure negatively affects the cost of equity capital. However, the results of this study contradict the study conducted by Francis et al. (2005) and Pure (2004) who concluded that the level of voluntary disclosure raises the cost of equity capital.

The difference in the results of this study with previous research is due to the difference of focus. This study only focused on the financial items that are voluntarily disclosed by company. This focus differs from previous research that generally observes both financial and non-financial items at once. The focus on financial items is related to the purpose of this study to determine the effect of voluntary disclosure on the cost of equity capital. The financial items presented by the company in voluntary disclosure are more relevant to the pillars of corporate governance transparency, i.e. to minimize investment risk for investors.

These results reinforce the claim that companies need to increase voluntary disclosure. The results of this study indicate conformity with the opinion of the FASB (2001) in one of its reports on voluntary disclosure stating that "... Informative disclosures that help investors interpret the cost of capital". These results support the view that voluntary disclosure is another form of information that investors use to supplement earnings information in fundamental analysis processes (Penman, 2013), and support Holder-Webb (2003) and Hasan and Halbouni (2013) statement that voluntary disclosure is useful to mitigate uncertainty over the future of the company.

## **5. CONCLUSION, LIMITATION, AND SUGGESTION**

### **5.1 Conclusions**

This study examines the influence of board independence and voluntary disclosure on the cost of equity capital. From the research results obtained, we draw the following conclusion.

1. This study finds that the increase in board independence does not significantly improves earnings quality and subsequently lowers the cost of equity capital. This means monitoring does not improve the behavior of managers in managing corporate finance. Instead, investor might lower the rate of return he/she requests without obtaining the belief that increased board independence will capable of changing manager behavior.
2. This study finds that increased voluntary disclosure reduces the cost of equity capital. Voluntary disclosure is an additional piece of information that adds to the investor's understanding of the company. This information is needed by investors for fundamental analysis to estimate the level of risk and return they demanded. However, voluntary disclosure cannot be interpreted as a condition (disclosure regime) that can change the behavior of managers in managing corporate finance.

### **5.2. Limitations**

This study has a number of limitations, among others are:

1. This research uses quantitative approach to measure the level of good voluntary disclosure. This is based on the assumption that firms that disclose more are more transparent firms, which means better companies. This approach is taken because until now there is no exact measurement of good disclosure. Therefore, this research can contain bias in interpreting quantity as the quality of transparency.
2. Although this study explains the phenomenon of why the level of equity cost of a company stays vary, in this context company has complied with the regulation



regarding board independence. However, this study does not address the factors that cause variations in the level of board's independence itself.

### 5.3 Suggestions

Based on the results of research that has been performed, the authors provide the following suggestions.

1. Companies may consider reducing the cost of equity capital by improving board independence and voluntary disclosure.
2. Subsequent research can seek a more appropriate measure to measure good voluntary disclosure levels, thereby reducing the bias in interpreting quantity with the quality of transparency.
3. Further research needs to explain the factors that lead to variations in board independence. Assuming the company adheres to the regulation of the board's level of independence, and understands the benefits of board independence, the data shows that not all companies optimize the level of their board independence. Therefore the reason companies do not optimize the benefits of board independence needs to be explained.

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