



**DETERMINANTS OF INTELLECTUAL CAPITAL  
DISCLOSURE IN INITIAL PUBLIC OFFERINGS**

**S1-THESIS**

A Thesis Submitted in Partial Fulfillment of the Requirement for the Award of  
Bachelor of Economics (Management)

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So this statement I make with truth, without any coercion and pressure from any party and willing to get academic sanction if it turns out later this statement that I made is not true.

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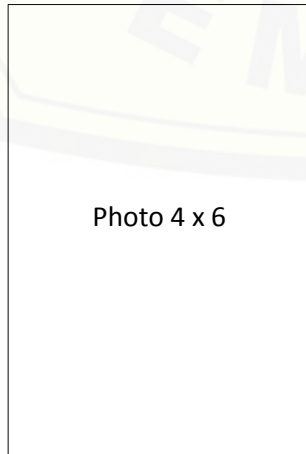


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## DEDICATION

This thesis is gratefully dedicated to:

1. My beloved mama Yuliwati who has been my angel all this time and gives her infinite love, and also my beloved father Kus Irianto (*Alm*).
2. My sweet heart sister Fitri Febriyanti, my brothers Agung Bimantoro and Agus Nursahbana who give me spirit to achieve all the goals of my life.
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**MOTTO**

“For indeed, with hardship (will be) ease.”

(QS. Al Insyirah: 5)

“It seems like life is contradictory: the harder you work the easier life. Good luck will come to someone who does not rely on a good fortune. Effort and effort is the easiest way out and if you try to avoid this life endeavor it will increasingly difficult.”

(Ralph Marston)

“The best way to success is planning, doing and praying.”

(Ira Puspita Sari)

“I’m not stop when I’m tired but I’m stop when I’m done.”

(Ira Puspita Sari)

## SUMMARY

**Determinants of Intellectual Capital Disclosure in Initial Public Offerings**; Ira Puspita Sari; 140810201128; 38 pages; Department of Management Faculty of Economics and Business, Universitas Jember.

Intellectual Capital Disclosure (ICD) is one of the current issues in finance. This study is different from traditional Intellectual Capital that is used VAIC<sup>TM</sup> to measure Intellectual Capital of the company (Pulic, 1998). This study used ICD index developed by Bukh et al (2005). ICD index is consisting of 78 items. ICD is closely related to efforts to reduce the occurrence of information asymmetry. If the company discloses more information, it will affect investors' perception that the company has a good IPO quality. This study examined the effect of ownership retention, leverage, company size, company age, and underwriter reputation on ICD. This study was performed on the companies that conducted IPOs in Indonesia Stock Exchange for periode 2008-2017.

This study was quantitative study to test the hypotheses (explanatory research). The populaion were companies in primary and secondary sectors. There were 68 companies as the population. The data were collected from prospectus's company. There are 65 sample companies selected using purposive sampling. The data are secondary data generated from company's website and IDX website. Multiple linear regression was used to analyze the data. The hypotheses testing used t-test.

Results showed that there are three variable have positive effect on ICD namely ownership retention, company age, and underwriter reputation. However, other factor such as leverage and company size did not have significant effect on ICD. Ownership retention is a positive signal to investor to show the quality of the company. Companies that have been long in business will disclose more IC information. A reputable underwriter will encourage company to disclose more information. Companies with high level of leverage do not disclose more information because they want to mantain its reputation. A large companies do



not disclose more IC's information because they want to keep the company's competitive advantages.

So, it can be concluded that ownership retention, company age and underwriter reputation determine the extent of ICD. Although, leverage and company size do not determine the extent of ICD.

**Keyword:** Intellectual Capital Disclosure, ownership retention, leverage, company size, company age, underwriter reputation.





## FOREWORD

Alhamdulillah, I would like to thank to Allah SWT, for his grace and gifts, I can finish my thesis entitled "Determinans of Intellectual Capital Disclosure in Initial Public Offerings". This thesis is prepared to fulfill one of the requirements for award of bachelor of economics in Management Departement, Faculty of Economics and Business, Universitas Jember.

In preparing this thesis many parties have helped me. Therefore I want to thank to:

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9. My alma mater: Departement of Management, Faculty of Economics and Business, Universitas Jember.

All suggestions and constructive criticism will be very authors appreciated. Hopefully this thesis can be useful and give additional knowledge to the readers.

Jember, March 22<sup>nd</sup> 2014

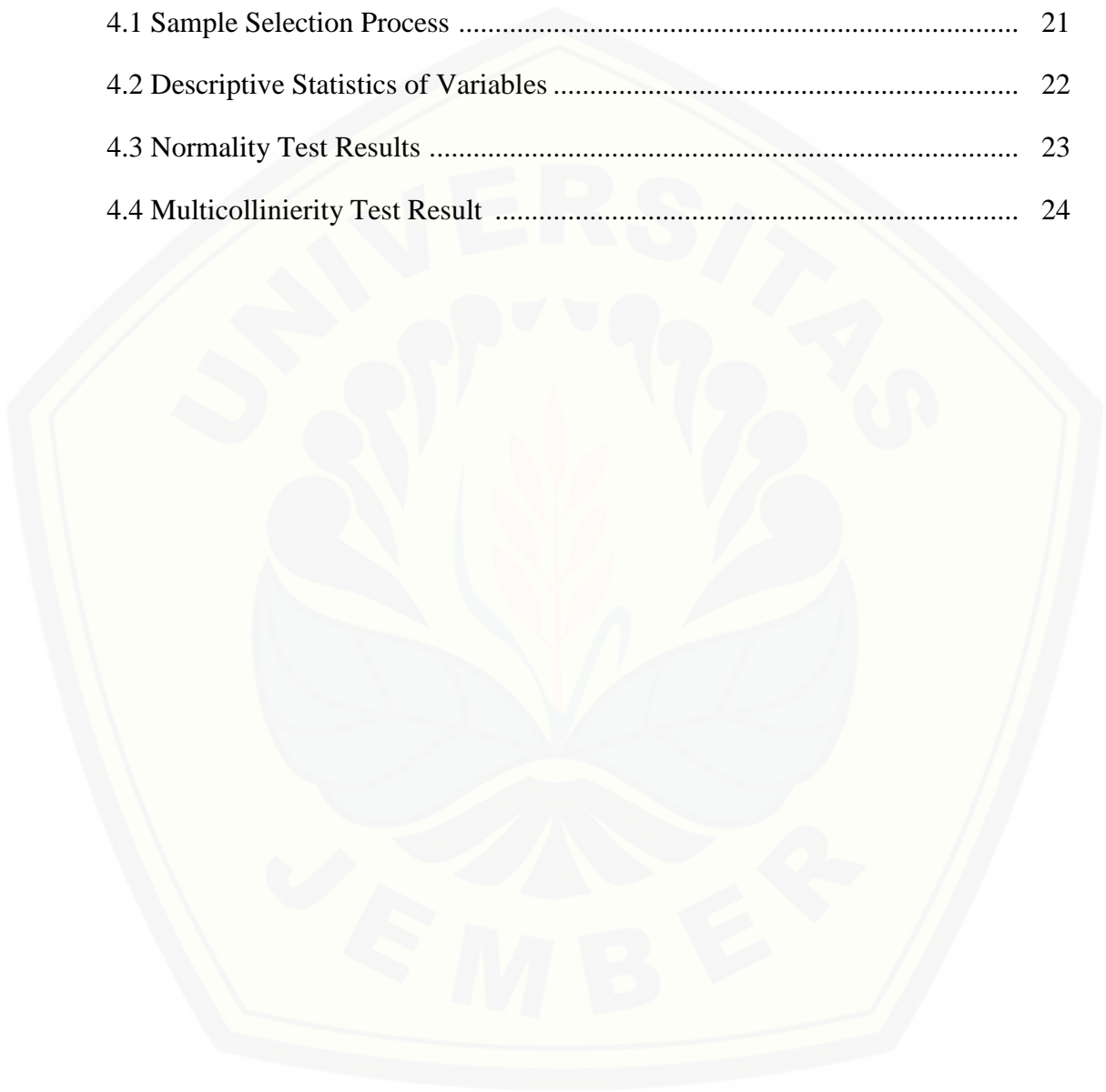
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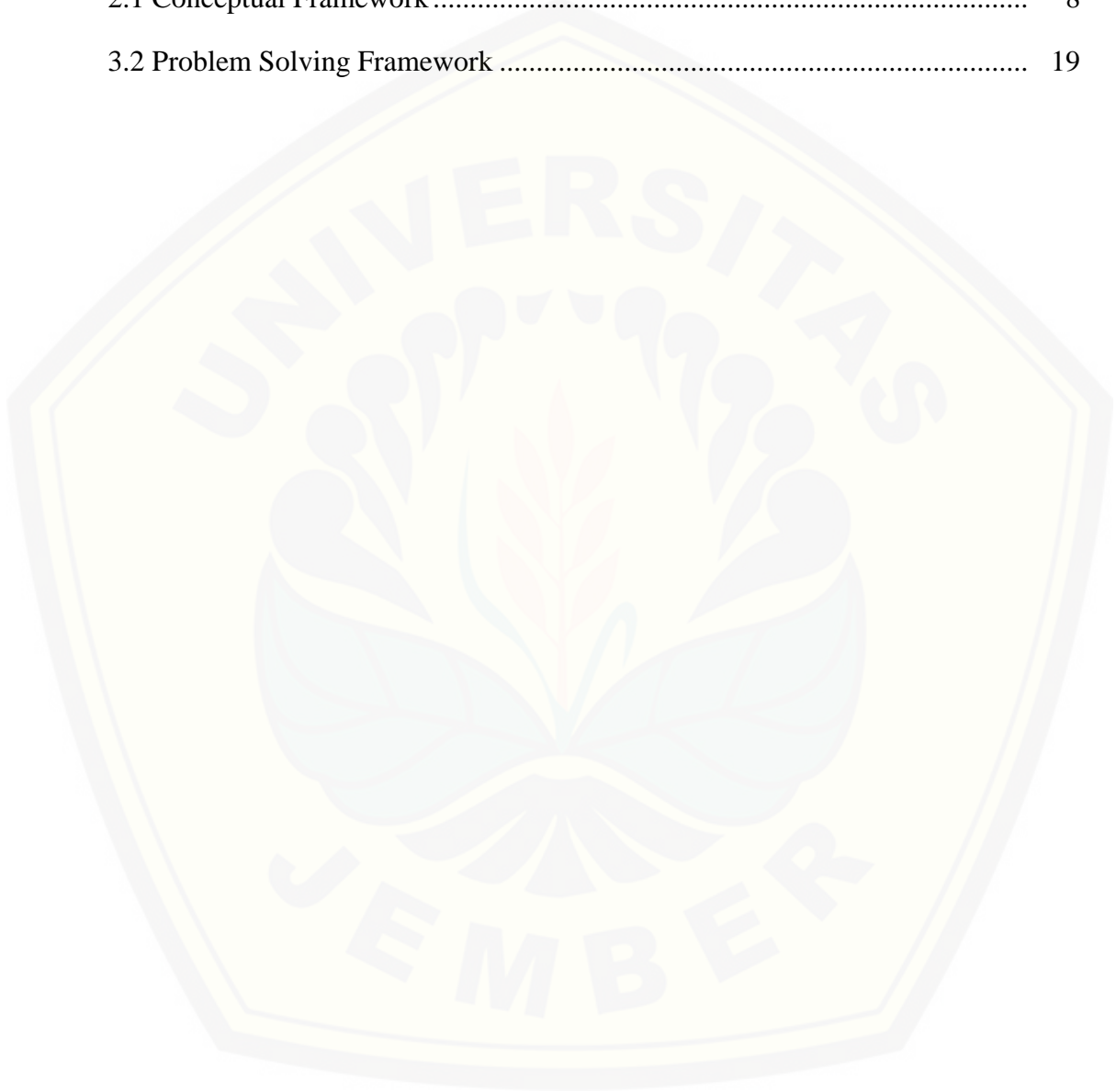
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## CHAPTER 1. INTRODUCTION

### 1.1 Background

The management of intangible assets is considered very important to be done as one of the company's competitive advantage. Many companies are starting to pay attention to the importance of managing intangible assets as one of the company's competitive strategies. One of the approach to measuring intangible assets is by using intellectual capital (IC). According to Singh and Zahn (2008) business dynamics in the 21<sup>st</sup> century is determined and controlled by intellectual elements and knowledge.

The emergence of thoughts about IC was originated from a study by Pulic (1998), that it could be measured using Value Added Intellectual Coefficient (VAIC<sup>TM</sup>). There are three main components of VAIC<sup>TM</sup>, physical capital (measured using Value Added Capital Employed (VACA)), human capital (Value Added Human Capital (VAHU)), and structural capital (Structural Capital Value Added (STVA)).

This study uses a disclosure index to measure Intellectual Capital Disclosure (ICD) as also employed in Bukh et al (2005), Singh and Zahn (2008), Rimmel et al. (2009), and Cordazzo and Vergauwen (2012). There have been a number of studies examining the relationship between financial performance and IC. These studies motivated by the existing regulation on the mandated report of intangible assets as stated in statement of standard on PSAK No. 9. Studies had examined the relationship various factors of the financial performance and IC include Bukh et al. (2005), Singh and Zahn (2008), Rimmel et al. (2009), Sari (2011), Cordazzo and Vergauwen (2012), Septiana (2013), Faradina (2015) and Nishak (2017).

Yet the results of the studies were still inconsistent. For example Rimmel et al. (2009) found company age has positive correlation with ICD, but Oktavianti (2014) found the opposite. Cordazzo and Vergauwen (2012) found company size has no correlation with ICD, but Faradina (2015) found that company size positively affects ICD.

Most of studies on IC were focused on public company. Limited studies had concentrated on the initial public offering (Bukh et al., 2005; Singh and Zahn,



2008; Rimmel et al., 2009; Sari, 2011; Cordazzo and Vergauwen, 2012; Septiana, 2013; Nishak, 2017). IC information is disclosed in the prospectus.

ICD is believed to reduce information asymmetry (Singh and Zahn, 2008). If the information received is different between investors, then the informed investors would be able to generate profits (abnormal returns). This is also true in the case of IPO. Good quality IPO company would have higher information to disclose information to reduce information asymmetry. ICD is expected to provide investors better information for better valuation of the IPO.

This study focused on the examination of the effect of ownership retention, leverage, company size, company age and underwriter reputation on ICD. Previous studies had shown that ownership retention was positively related to ICD (Singh and Zahn, 2008; Sari, 2011; Kumala and Sari, 2016). In addition, other variables that were consistently related to ICD were company size (Oktavianti, 2014; Leonard and Trisnawati, 2015; Faradina, 2015), and company age (Rimmel et al., 2009; Rashid et al., 2012; Oktavianti, 2014). However, some studies did not find significant relationship between ownership retention and ICD (Rimmel et al., 2009; Nishak, 2017); company size and ICD (Bukh et al., 2005; Rimmel et al., 2009; Cordazzo and Vergauwen, 2012), company age and ICD (Bukh et al., 2005; Sari 2011).

Based on the previous studies conflicting results, it is interesting to re-examine this issue. The primary and secondary sectors were chosen because these sectors have an important role in developing the Indonesian economy through the creation of products. Intangible assets will be very useful for companies. For example, knowledge will be used in creating product innovations for the companies. So, the companies can use it to face the competitors and achieve competitive advantages.

## **1.2 Problem Formulation**

Previous studies indicated that many factors affected ICD such as ownership retention, but some findings showed inconsistent results. For example, Sari (2011) found that ownership retention positively affects ICD. However Rimmel et al. (2009) and Nishak (2017) reported no relationship between the two.

Based on the description above, the formulation of the problem is whether ownership retention, leverage, company size, company age, and underwriter reputation affect ICD in primary sectors (agricultural sector and mining sector) and secondary sectors (basic industries and chemical sector, miscellaneous sector, and consumer goods sector) in the case of IPOs.

### **1.3 Research Objectives**

Based on the problem formulation above, the purpose of this study is to analyze the effect of ownership retention, leverage, company size, company age, and underwriter reputation on ICD in IPOs of primary sectors (agricultural sector and mining sector) and secondary sectors (basic industries and chemical sector, miscellaneous sector, and consumer goods sector).

### **1.4 Research Benefits**

The results of this study are expected benefit to for some parties, namely for companies, investors, and academics.

a. **The Companies**

This study is expected to be considered by the company's management in making decisions related to ICD in the prospectus, especially companies that will go public.

b. **Investors**

This study is expected to be used as additional information for investors to appraise the company performance through ICD in determining whether the company has a competitive advantage.

c. **Academics**

This study is expected to be used an additional reference for further research especially on the determinants of ICD.

## CHAPTER 2. LITERATURE REVIEW

### 2.1 Theoretical Review

#### 2.1.1 Intellectual Capital

Intellectual capital (IC) is one of the company's key strategic assets in the knowledge-based economy (Rehman et al., 2012). IC is a set of knowledge assets, information, intellectual property, and experience that companies use as resources to create value. The use of knowledge is a major force in creating growth and well being as defined by the Organization for Economic Co-operation and Development (Rahardian, 2011). Human intellectual ability becomes an intellectual key and a strategic asset that improves the efficiency of a company. There are three main elements in IC namely knowledge relating to employees (human capital), knowledge relating to the customer (customer capital), and knowledge related companies (structural capital). These three elements form IC (Boekestein, 2006).

There are no rules that regulate and require the Intellectual Capital Disclosure (ICD). ICD is done voluntarily. In contrast, the mandatory disclosure must be made in accordance with the financial or accounting standards and regulated in the prevailing capital market regulations. Voluntary disclosure is made in accordance with the expectation of the company (Sari, 2011). This indicates that the company is free to disclose the elements or information will be informed in the company report.

There are many benefits for the company that disclose ICD information. First, ICD will reduce information asymmetry. Second, ICD can affect market perception of the market value and able to increase the demand for corporate securities (Sari, 2011). Information asymmetry is a condition where there is a difference in information that managers have better information than investors. In addition, investors will be able to assess the company more accurately about the prospects of the company in the future. ICD will affect the company's investment decisions, which it will have implications on the company's ability to raise capital.

Pulic (2004) used Value Added Intellectual Coefficient (VAIC<sup>TM</sup>) as an instrument to measure the company's IC. This method provided information on efficiency of value creation from tangible assets and intangible assets of the company. This model began with the company's ability to invent value added. Furthermore, this added value was considered as the most objective indicator to assess business success and showed the company's ability in value creation. The VAIC<sup>TM</sup> method measured IC by calculating the value added derived from the three combinations of human capital known as VAHU, structural capital known as STVA and capital employed commonly called VACA (Lestari, 2012). VAIC<sup>TM</sup> method is relatively easy to do because the calculation uses the data contained in the company's financial statements. This frame is a traditional IC concept that focuses on the company's financial statements.

This study used a contemporary intellectual framework that focused on ICD and focused on the company's prospectus. According to Bukh et al., (2008) to measure ICD we can use ICD index. There are many IC components included in the process of calculating ICD index. However, there are six main components in measuring ICD index, namely human resources, customers information technology, research and development, process, and strategy (Sari, 2011). The first is human resources which include reports on the qualifications of employees, the handling of a task management system of human resource development and employee satisfaction. Customer related issues which include a report on the composition of the customer, the business enterprise to develop relationships and customer satisfaction as well as customer loyalty. The information technology issues cover the scope of availability of information technology systems used to support the company's activities. Research and Development is oriented on the amount of business activity mainly preferred by the company. The process is expression of the quality, error rate, and the waiting time to the perimeter of company. The last is strategy taken by the company in order to utilize existing resources to create value and achieve the company's competitive advantage.



## 2.2 Previous Studies

Studies on the determinants of ICD had been done in various setting. Table 2.1 provides summary of previous studies on the determinants of ICD in IPO prospectuses.

Table 2.1 Summary of Previous Studies

No	Name of Researcher	Research Variables	Methods of Analysis (Country)	Research result (significant findings)
1	Bukh et al. (2005)	Dependent variable: ICD Independent variables: different industries, managerial ownership, company size, company age	ANOVA (Denmark)	- Different industries (+), - Managerial ownership (+)
2	Singh and Zahn (2008)	Dependent variables: ICD Independent variable: ownership retention, proprietary cost, corporate governance structure	Ordinary Least Square (Singapore)	- Ownership retention (+) - Proprietary cost (-)
3	Rimmel et al. (2009)	Dependent variables: ICD Independent variables: industry differences, managerial ownership, company age, company size	ANOVA (Japanese)	Company age (+)
4	Sari (2011)	Dependent variable: ICD Independent variables: ownership retention, underwriter reputation, company age, independence of the board	Multiple linear regression (Indonesia)	- Ownership retention (+) - Underwriter reputation (+)
5	Rashid et al. (2012)	Dependent variables: ICD Independent variables: board size, board independence, company age, leverage, board diversity, company size, auditor, and underwriter.	Multiple linear regression (Malaysia)	- board size (+) - board independence (+) - company age (+) - leverage (+) - underwriter (+) - listing board (+)
6	Cordazzo and Vergauwen (2012)	Dependent variable: ICD Independent variables: company size, maturity, company age, independence of the board	Multiple Linear Regression (United Kingdom)	- Maturity (+) - Independence of the board (+)
7	Septiana (2013)	Dependent variables: ICD Independent variables: the size of the board of directors, directors	Multiple linear regression (Indonesia)	- Size of directors (+) - Auditor (+)

To be continued

Continuation from Table

No	Name of Researcher	Research Variables	Methods of Analysis (Country)	Research result (significant findings)
		diversity, independent directors, company size, company age, leverage, gross of proceeds, the underwriter reputation and auditor.		
8	Oktavianti (2014)	Dependent variable: ICD Independent variables: company size, company age, leverage, profitability, independence of the board, ownership concentration	Multiple linear regression (Indonesia)	- Company size (+) - Company age (-) - Profitability (+)
9	Faradina (2015)	Dependent variable: ICD Independent variables: company size, company age, leverage, profitability, ownership concentration	Multiple linear regression (Indonesia)	Company size (+)
10	Leonard and Trisnawati (2015)	Dependent variable: ICD Independent variables: company size, company age, different industries, auditor, management ownership, profitability, leverage	Multiple linear regression (Indonesia)	Company size (+)
11	Kumala and Sari (2016)	Dependent variable: ICD Independent variables: ownership retention, leverage, auditor, different industries	Multiple linear regression (Indonesia)	- Ownership retention (+) - Leverage (+) - Auditor (+)
12	Nishak (2017)	Dependent variable: ICD Independent variables: profitability, leverage, ownership retention, company size.	Multiple linear regression (Indonesia)	Profitability (+)

Source: Bukh et al. (2005), Singh and Zahn (2008), Rimmel et al. (2009), Sari (2011), Rashid et al. (2012), Cordazzo and Vergauwen (2012), Septiana (2013), Oktavianti (2014), Faradina (2015), Leonard and Trisnawati (2015), Kumala and Sari (2016), Nishak (2017).

As shown in Table 2.1, it is known that ownership retention had a positive influence on ICD (Singh and Zahn, 2008; Sari, 2011; Kumala and Sari, 2016). However, Rimmel et al. (2009) and Nishak (2017) reported no relationship between ownership retention and ICD. Leverage had positive influence on ICD

(Rashid et al., 2012; Kumala and Sari, 2016). Yet, Septiana (2013), Oktavianti (2014) Faradina (2015), Leonard and Trisnawati (2015), and Nishak (2017) reported no relationship between the two. Company size positively affected ICD (Oktavianti, 2014; Leonard and Trisnawati, 2015; and Faradina, 2015). In contrast, Bukh et al. (2005), Rimmel et al. (2009), Cordazzo and Vergauwen (2012), Septiana (2013), and Nishak (2017) showed no relationship between company size and ICD. Company age positively influenced ICD (Rimmel et al., 2009; Rashid et al., 2012). Interestingly, Oktavianti (2014) reported negative effect. In addition, Bukh et al. (2005), Sari (2011), Cordazzo and Vergauwen (2012), Septiana (2013), Faradina (2015), Leonard and Trisnawati (2015) reported that company age had no significant effect on ICD. Underwriter reputation positively affected ICD (Sari, 2011; Rashid et al., 2012). However, Septiana (2013) found that underwriter reputation had no significant effect on ICD. So, the results of the previous studies were still inconsistent.

### 2.3 Conceptual Research Framework

This study aims to assess the determinants of ICD in the prospectus of the primary and secondary sectors that made an IPO. Conceptual framework can be described in Figure 2.1.

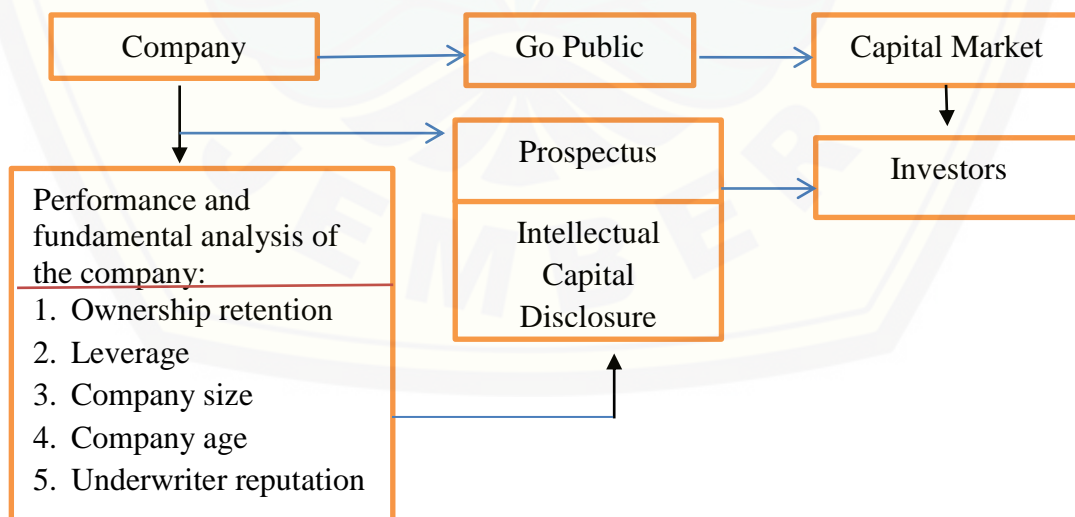


Figure 2.1 Conceptual Framework



Companies that will sell their shares in the capital market must go through the process of going public. One of the requirements in the process of going public is the publication of a prospectus. The company's prospectus contains information on the company's financial and non-financial conditions. This study focuses on the effect of non-financial information on ICD. The extent of ICD is varies between companies. The difference can be caused by several factors which one of them are performance and fundamental factors of the company.

ICD is used as the dependent variable. ICD index is used to measure the extent of ICD in the prospectus. Ownership retention, leverage, company size, company age, and underwriter reputation are used as the independent variables.

## **2.4 Hypotheses Development**

### **2.4.1 Relationship between Ownership Retention and Intellectual Capital Disclosure**

Ownership retention is the proportion of shares retained by the company after IPO. If the old stock owners tend to retain their shares then it will be a good signal to investors that the company has good quality (Leland and Pyle, 1977). Companies with high level of ownership retention is seen as having good prospects. The company with good prospect will provide good value of wealth for stockholders in the future. Good quality company will tend to provide more disclosures in the prospectus to support the company quality (Nishak, 2017).

Previous studies reported conflicting results on the relationship between ownership retention and ICD. Singh and Zahn (2008), Sari (2011), and Kumala and Sari (2016) found positive effect. It meant companies with greater interest to retain ownership of the old shares (ownership retention) will disclose more ICD. However, Rimmel et al. (2009) and Nishak (2017) reported no relationship between ownership retention and ICD.

Based on that theory and previous studies, it is known that ownership retention has positive significant effect on ICD. In other words the higher the level of share held by the old shareholder, the wider disclosure of the company's ICD. Thus, the following hypothesis is proposed:

H1: ownership retention positively affects ICD.

#### 2.4.2 Relationship between Leverage and Intellectual Capital Disclosure

Leverage is used to measure a company's ability to pay its liabilities. Company with high debt levels will endure higher agency costs compared to company with a small proportion of debt (Oliviera et al., 2008). To reduce the agency costs, the company seeks to make more disclosures. The agency theory predicts that firms with higher leverage ratios will disclose more information, as the agency cost company with such capital structures is higher (Jensen and Meckling, 1976). Company with high levels of debt or leverage will tend to disclose more information (Septiana, 2013). That is because the company has an liabilities to provide more extensive information to creditors.

Previous studies showed leverage positively affects ICD (Kumala and Sari, 2016; and Rashid et al., 2012). This indicated that companies with high leverage ratios, then the company would perform more disclosure especially ICD. However, Septiana (2013) and Faradina (2015) showed no significant relationship between leverage and ICD.

Based on that theory and empirical evidence, it is known that leverage has positive effect on ICD. It means that the higher leverage ratio of the company, the wider the disclosure of ICD's company. Thus, the following hypothesis is proposed:

H2: leverage positively affects ICD.

#### 2.4.3 Relationship between Company size and Intellectual Capital Disclosure

Company size shows a company scale. Large company tends to engage in more activity and typically has different business units that are critical success factors and has the potential for long-term value creation (Bozzolan et al., 2003). An interested stakeholder group will be more often to oversee large companies about how management manages its intellectual capital, such as workers, customers and workers' organizations. Therefore, company is required to disclose more information, including information about intellectual capital. Large size companies have a lot of engagements to parties outside so that the demands in the higher disclosure. Large companies will reveal more information when

compared to small companies (Nishak, 2017). This indicates that company size becomes one of the decisive factors of ICD.

Previous studies showed different findings on the relationship between company size and ICD. Oktavianti (2014), Leonard and Trisnawati (2015), and Faradina (2015) showed positive effect. This meant that large company will more disclose the company's information mainly related to ICD. However, Bukh et al. (2005), Rimmel et al. (2009), and Nishak (2017) showed no significant effect of company size on ICD.

Based on the above description, it seem the larger the company, the wider the disclosure of ICD's company. Thus, the following hypothesis is proposed:

H3: company size positively affects ICD.

#### 2.4.4 Relationship between Company age and Intellectual Capital Disclosure

Company age indicates how long the company has been in the business. Old companies are assumed to have more experiences than younger companies. The company has very detailed information about the company and understands the importance of reporting company information to outsiders of companies that have an interest in the company (Sari, 2011). Company life can be a proxy for company business risk. The extent of company disclosure is usually related to how long the company is in business (Rimmel et al., 2009). Longer the life of the company will provide a wider disclosure of information, including the disclosure of intellectual capital than other company whose age is younger.

Some researchers found different results about the relationship between company age and ICD. Rimmel et al. (2009) and Rashid et al. (2012) showed that company age had positive influence on ICD. It meant a company that has long in running its business, usually the disclosure of ICD would be more widespread. However, Oktavianti (2014) reported a negative effect. Other results showed that company age had no significant effect on ICD (Sari, 2011; Faradina, 2015).

Based on that explanation and previous studies, can be concluded that company age has positive influence on ICD. The older of the company, the higher is the extent of its ICD. Thus, the following hypothesis is proposed:

H4: company age positively affects ICD.

#### 2.4.5 Relationship between Underwriter Reputation and Intellectual Capital Disclosure

Underwriter is party who assist issuers in preparing and making of prospectus. A reputable underwriter has extensive experience in the preparation of prospectus that contain wider and better information. The underwriter's reputation may impact investors' perceptions of the quality of the company's prospectus. If the issuer uses a reputable underwriter then the investor will respond positively to the company (Sari, 2011). It can be concluded that a reputable underwriter will be more knowledgeable in disclosing company information including IC compared to underwriters that are not in good standing.

Some researchers found different results on the relationship between underwriter reputation and ICD. Sari (2011) and Rashid et al. (2012) reported that underwriter reputation had a significant positive influence on ICD. It indicates if the company uses reputable underwriter, then disclosure related information ICD's company will be more broadly. In contrast, Septiana (2013) reported no effect of underwriting reputation on ICD.

Based on the afore mentioned explanations, it is known that underwriter reputation has positive influence on ICD. If company uses high reputable underwriter, then the disclosure of ICD will be wider. Thus, it can be hypothesized as follow:

H5: underwriter reputation positively affects ICD.

## CHAPTER 3. RESEARCH METHOD

### 3.1 Research Design

This study was a quantitative study to test the hypotheses (explanatory research). This study analyzed the determinants of ICD (ownership retention, leverage, company size, and company age) on primary sectors (agricultural sector and mining sector) and secondary sectors (basic industries and chemical sector, miscellaneous sector, and consumer goods sector) that performed the initial public offering period 2008-2017.

### 3.2 Population and Sample

The population of this study were the primary sectors (agricultural sector and mining sector) and secondary sectors (basic industries and chemical sector, miscellaneous sector, and consumer goods sector) that performed IPO at Indonesia Stock Exchange during 2008-2017. The sample was determined using purposive sampling with the following criteria:

1. Company prospectus was accessible on the company's website or other accessible sources.
2. Company that had complete data in their prospectus or in other words there was no blank page in the prospectus that causes the incomplete of data related to study variables.

### 3.3 Types and Sources of Data

The type of data used was secondary data generated by Indonesia Stock Exchange (IDX) website and the company prospectus. The prospectus was obtained from the websites of each companies and other websites (<https://ticmi.co.id/> and <https://www.sahamok.com/>).



### 3.4 Operational Definition and Measurement of Variables

Operational definition and measurement of variables are explained as follow.

#### a. Independent Variables

The independent variables are ownership retention, leverage, company size, company age, and underwriter reputation. All variables were measured using ratio scale, except for underwriter reputation which was measured using nominal scale. The definition of each variables are as follows:

- 1) Ownership retention is the shares proportion held by the owners after the IPO.
- 2) Leverage is a company's ability to use assets that have a fixed cost (debt) in order to realize the company's goal to maximize the wealth of the stockholders.
- 3) Company size is the scale of the company shown by the total value of assets.
- 4) Company age indicates how long the company has been in the bussiness.
- 5) The underwriter reputation is underwiter who are included in the top 20 ranks of 50 most active IDX members in the total trading frecueny.

#### b. Dependent Variable

Dependent variable in this study is ICD. The approach to measuring the ICD variable is based on Bukh et al. (2005). There are 78 items of ICD index classified into 6 main categories. The ICD index includes resources (27 items), customer (14 items), information technology (5 items), processes (8 items), research and development (9 items), and strategic statements (15 items).

### 3.5 Data Analysis Method

#### 3.5.1 Measurement of Variables

The measurement of the dependent and independent variables is explained as follows.

#### a. Intellectual Capital Disclosure (ICD)

The disclosure index was used to measure the amount of information about IC. This study refers the approach proposed by Bukh et al. (2005) on what items

are included in the calculation of the disclosure index. Calculation ICD index is calculated by the following formula:

$$\text{Score} = \frac{\sum d_i}{M} \times 100\%$$

Where:

Score = value of ICD that is disclosed by the company (in percentages).

$d_i$  = number of items measured (given score 1 if item is disclosed in the IPO prospectus and given score 0 if the item is not disclosed in the IPO prospectus).

M = total number of items measured (78).

#### b. Ownership Retention

Ownership retention is calculated using the following formula:

$$\text{OwnRet} = \frac{\text{number of share by owners}}{\text{total number of share after IPO}}$$

#### c. Leverage

Leverage is measured using the following formula (Kasmir, 2010):

$$\text{Lev} = \frac{\text{Total debts}}{\text{total assets}} \times 100\%$$

#### d. Company Size

Company size is measured using natural logarithm of total assets that is generated from the latest year available in the prospectus (Septiana, 2013).

#### e. Company Age

Company age is measured using the following formula:

$$\text{Age} = \text{Listing date} - \text{Establishment date}$$

#### f. Underwriter Reputation

The measurement of underwriter's reputation uses a method by giving a score 1 for underwriters who are included in top 20 ranks of 50 most active IDX members in total trading frequency and score 0 otherwise (Sari, 2011).

Underwriter reputation data each year is obtained from IDX Fact Book.

### 3.5.2 Normality Test

There were two normality test used in this study. First was normality test of data to know whether the data were normally distributed or not. Second was



normality test of model performed to detect whether the value of regression residual was normally distributed or not. Kolmogorov-Smirnov test was used because the data were more than 50. The steps to test the data normality are as follows:

a. Formulate the hypothesis

$H_0 : \beta_i = 0$ , the data are normally distributed

$H_a : \beta_i \neq 0$ , the data are not normally distributed

b. Determine the level of significance ( $\alpha$ )

The significance level used in this study is 5%.

c. Perform the normality test by using Kolmogorov-Smirnov test.

d. Make a conclusion

1) If  $p\text{-value} > \alpha$ , then  $H_0$  is accepted (data are normally distributed)

2) If  $p\text{-value} < \alpha$ , then  $H_0$  is rejected (data are not normally distributed)

If the data are not normally distributed, it is necessary to convert the data value into Z-score. If the data are transformed into Z-score then the data are assumed to have normal distribution.

### 3.5.3 Multiple Linear Regression Analysis

Multiple Linear Regression was used to measure the relationship between dependent and independent variables. This test was used to test the effect of ownership retention, leverage, company size, company age, and underwriter reputation on ICD. The equation of the regression model is as follows:

$$ICD_i = b_0 + b_1 OwnRet_i + b_2 LEV_i + b_3 SIZE_i + b_4 AGE_i + b_5 UND_i + e_i$$

Where:

$ICD_i$  = ICD index of company- $i$

$b_0$  = constants

$b_1, b_2, b_3, b_4, b_5$  = regression coefficients

$OwnRet_i$  = ownership retention of company- $i$

$LEV_i$  = leverage of company- $i$

$SIZE_i$  = company size of company- $i$

$AGE_i$  = company age of company- $i$

$UND_i$  = underwriter reputation of company- $i$

$e_i$  = error term of company- $i$

#### 3.5.4 Classical Assumption Test

The regression model must pass the classical assumption tests for the regression model to be BLUE (Best Linear Unbiased Estimator). Classical assumption tests include multicollinearity and heteroscedasticity tests.

##### a. Multicollinearity Test

The multicollinearity test was performed to detect whether there was a strong correlation between independent variables. According to Ghozali (2014) multicollinearity could be detected using the VIF value (Variance Inflation Factor). If the value of  $VIF \leq 10$ , it could be concluded that there is no multicollinearity. There are several ways to overcome when multicollinearity occurs. First is by transforming the variables into natural. Second, it is fixed by removing the variable that has  $VIF > 10$ , assuming it does not cause specification error or does not take any remedial action if  $R^2$  and F count are significant.

##### b. Heteroscedasticity Test

The heteroscedasticity test aimed to test whether the regression model of variant and residual inequality varies from one observation to another. It is called heteroscedasticity if the variant is different. Regression is good if there is no heteroscedasticity or the same variant (homoscedasticity). This study used Glejser test to examine heteroscedasticity (Ghozali, 2006). If there is heteroscedasticity, the data must be repaired by Weighted Least Square (WLS) method.

#### 3.5.5 Hypothesis Testing

The steps in performing the t-test are as follows.

##### a. Formulate hypotheses

$H_0 : \beta_i = 0$ , it means independent variables do not partially affect ICD.

$H_a : \beta_i \neq 0$ , it means independent variables partially affect ICD.

##### b. Determine the level of significance

The significance levels used in this study is ( $\alpha$ ) 10%.

- c. Perform the multiple linear regression test

The test uses one tailed t-test of the regression equation.

- d. Calculate the probability value.

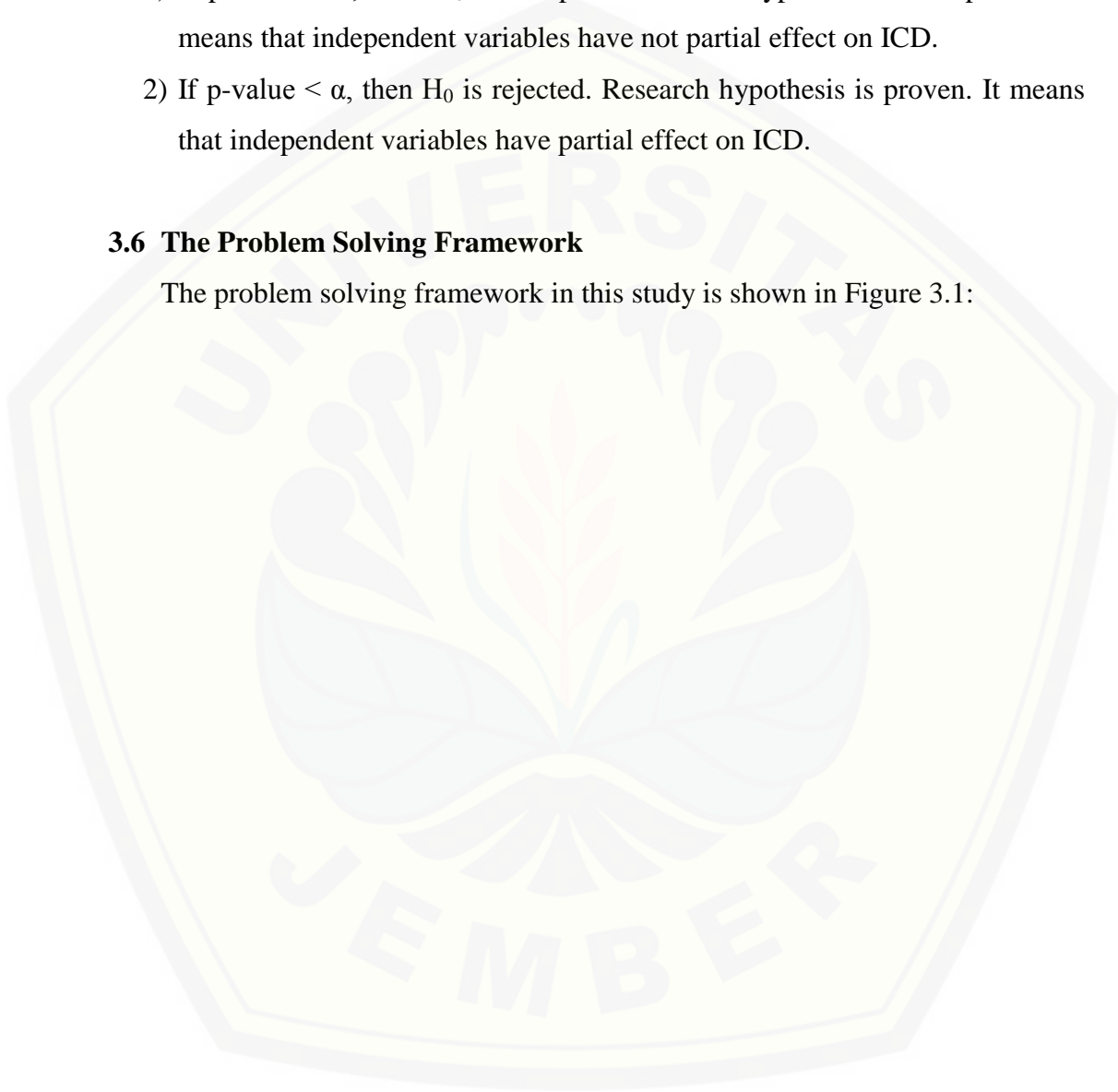
- e. Make a conclusion

The conclusion is made based on the following :

- 1) If  $p\text{-value} > \alpha$ , then  $H_0$  is accepted. Research hypothesis is not proven. It means that independent variables have not partial effect on ICD.
- 2) If  $p\text{-value} < \alpha$ , then  $H_0$  is rejected. Research hypothesis is proven. It means that independent variables have partial effect on ICD.

### 3.6 The Problem Solving Framework

The problem solving framework in this study is shown in Figure 3.1:



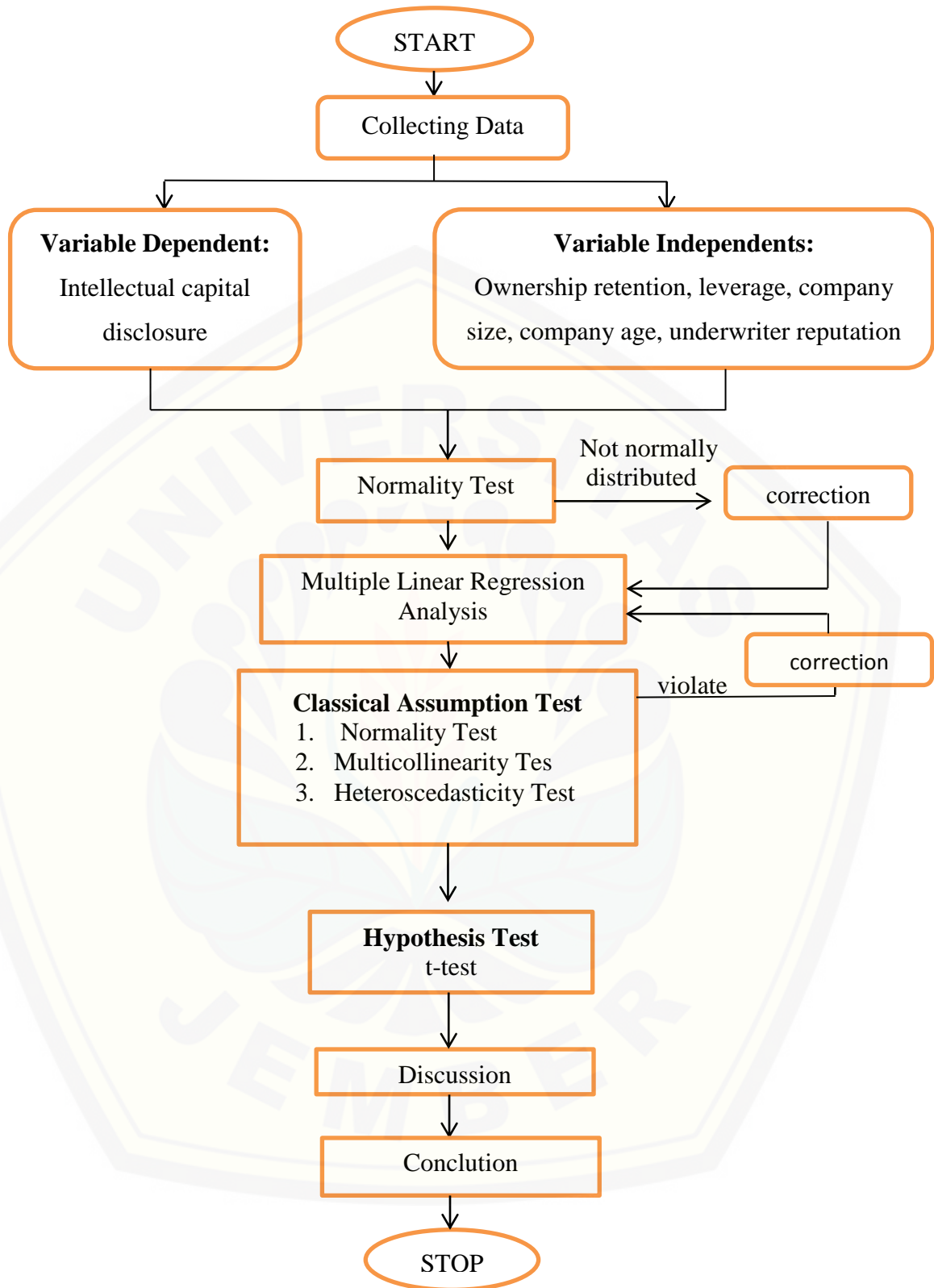


Figure 3.1 Problem Solving Framework

Description :

Description of the Problem Solving Framework as follows:

1. Start, research begins.
2. This study is begun by collecting secondary data form prospectuses of companies conducting an IPO during the period of 2008-2017. The data is obtained from the website [www.idx.co.id](http://www.idx.co.id) and related company website.
3. Calculate all dependent and independent variables in this study.
4. Perform normality test data to determine whether the data is normally distributed or not. If the data is not normally distributed it will be corrected by converting the data value into Z-score.
5. Analyze the influence of independent variables (ownership retention, leverage, company size, company age, and underwriter reputation) to the dependent variable (ICD) using multiple linear regression analysis.
6. Perform a classical assumption test to find out whether in variables and regression models there are violations such as normality, multicollinearity and heteroscedasticity. If the model violates BLUE criteria, we should make correction and run regression again.
7. Conduct hypotheses test that aims to determine the effect of ownership retention, leverage, company size, company age, and underwriter reputation to ICD. Hypotheses testing is done by using t-test.
8. After do the test, the next step is discussion on the results of this study.
9. Make conclusions to answer the research objectives briefly.
10. Stop, research is done.



## CHAPTER 5. CONCLUSION AND SUGGESTION

### 5.1 Conclusion

This study examines the effect of ownership retention, leverage, company size, company age and underwriter reputation on ICD in primary and secondary sector that do an IPO period 2008-2017. There are 65 company are selected as a samples. The regression analysis was used to test the hypotheses. The conclusion base on the result and discussion are as follows:

1. Ownership retention positively affects on ICD. Ownership retention is a positive signal to investors to show the quality of company's IPO as well as to reduce the occurrence of information asymmetry.
2. Leverage has positive but insignificant effect on ICD. Company wants to maintain its reputation.
3. Company size has positive but insignificant effect on ICD.
4. Company age positively affects on ICD. This indicates that companies that have been long in the business will be more disclose IC information.
5. Underwriter reputation positively affects on ICD. A reputable underwriter will disclose more of the company information especially regarding IC.

### 5.2 Suggestion

According to the results of hypotheses testing, discussion, and limitations, the following are proposed.

1. For the company

Company is advised to disclose wider enterprise information, especially on ICD to reduce the occurrence of information asymmetry. Through the breadth of IC disclosure can be used as a strategy to attract investors.

2. For investors

Investors should pay more attention to ICD information in the prospectus of an IPO's company to make more accurate assessment of the company's quality. It can help investors in taking investment decisions

### 3. For academics

The next researchers are advised to use more proxies such as fundamental analysis for example ROA, ROE, or EPS (Oktavianti, 2014; Nishaq, 2017) and external factor such as auditor (Septiana, 2013) to examine the determinants of ICD. Researchers can conduct similar research with a narrower object to get more accurate results of research on a particular sector company or can also perform comparison between sectors.



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## Appendix 1

## Companies Selected as Study Samples

No	Code	Company Name	Listing Date
1	SIAP	Sekawan Intipratama Tbk	17 October 2008
2	BYAN	Bayan Resources Tbk	12 August 2008
3	GZCO	Gozco Plantations Tbk	15 May 2008
4	YPAS	Yanaprima Hastapersada Tbk	05 March 2008
5	NIKL	Pelat Timah Nusantara Tbk	14 December 2009
6	BWPT	BW Plantation Tbk	17 October 2009
7	GTBO	Garda Tujuh Buana Tbk	09 July 2009
8	BRMS	Bumi Resources Minerals Tbk	09 December 2010
9	BORN	Borneo Lumbung Energi & Metal Tbk	26 November 2010
10	KRAS	Krakatau Steel (Persero) Tbk	10 November 2010
11	ICBP	Indofood CBP Sukses Makmur Tbk	07 October 2010
12	HRUM	Harum Energy Tbk	06 October 2010
13	BRAU	Berau Coal Energy Tbk	19 August 2010
14	IPOL	Indopoly Swakarsa Industry Tbk	09 July 2010
15	ROTI	Nippon Indosari Corpindo Tbk	28 June 2010
16	BIPI	Benakat Petroleum Energy Tbk	11 February 2010
17	BAJA	Saranacentral Bajatama Tbk	21 December 2011
18	GEMS	Golden Energy Mines Tbk	17 November 2011
19	ARII	Atlas Resources Tbk	08 November 2011
20	SMRU	SMR Utama Tbk	10 October 2011
21	STAR	Star Petcohem Tbk	13 July 2011
22	ALDO	Alkindo Naratama Tbk	12 July 2011
23	SIMP	Salim Ivomas Pratama Tbk	09 June 2011
24	JAWA	Jaya Agra Wattie Tbk	30 May 2011
25	MBTO	Martina Berto Tbk	13 January 2011
26	WIIM	Wismilak Inti Makmur Tbk	18 December 2012
27	BSSR	Baramulti Suksessarana Tbk	08 November 2012
28	PALM	Provident Agro Tbk	08 October 2012
29	ALTO	Tri Banyan Tirta Tbk	10 July 2012
30	TOBA	Toba Bara Sejahtera Tbk	06 July 2012
31	TRIS	Trisula International Tbk	28 June 2012

32	ESSA	Surya Esa Perkasa Tbk	01 February 2012
33	SIDO	PT Industri Jamu dan Farmasi Sido Muncul Tbk	18 December 2013
34	SSMS	PT Sawit Sumbermas Sarana Tbk.	12 December 2013
35	KRAH	PT Grand Kartech Tbk	08 November 2013
36	SMBR	PT Semen Baturaja (Persero) Tbk	28 June 2013
37	SRIL	PT Sri Rejeki Isman Tbk	17 June 2013
38	DSNG	PT Dharma Satya Nusantara Tbk.	14 June 2013
39	ANJT	PT Austindo Nusantara Jaya Tbk.	08 May 2013
40	ISSP	PT Steel Pipe Industry of Indonesia Tbk	22 February 2013
41	MAGP	Multi Agro Gemilang Plantation Tbk	16 January 2013
42	IMPC	PT Impack Pratama Industri Tbk	17 December 2014
43	MBAP	PT Mitrabara Adiperdana Tbk	10 July 2014
44	CINT	PT Chitose Internasional Tbk	27 June 2014
45	DAJK	PT Dwi Aneka Jaya Kemasindo Tbk.	14 May 2014
46	WTON	Wijaya Karya Beton	08 April 2014
47	KINO	PT Kino Indonesia Tbk	11 December 2015
48	AMIN	PT Ateliers Mecaniques D'Indonesie Tbk.	10 December 2015
49	DPUM	PT Dua Putra Utama Makmur Tbk.	08 December 2015
50	BOLT	PT Garuda Metalindo Tbk.	07 July 2015
51	WSBP	Waskita Beton Precast Tbk	20 September 2016
52	AGII	Aneka Gas Industri Tbk	28 September 2016
53	CLEO	Sariguna Primatirta Tbk	05 May 2017
54	FIRE	Alfa Energi Investama Tbk	09 June 2017
55	KMTR	Kirana Megatara Tbk	19 June 2017
56	HRTA	Hartadinata Abadi Tbk	21 June 2017
57	WOOD	Integra Indocabinet Tbk	21 June 2017
58	HOKI	Buyung Poetra Sembada Tbk	22 June 2017
59	MARK	PT Mark Dynamics Indonesia Tbk.	12 July 2017
60	MDKI	PT Emdeki Utama Tbk	25 September 2017
61	BELL	PT Trisula Textile Industries Tbk	03 October 2017
62	ZINC	PT Kapuas Prima Coal Tbk	16 October 2017
63	PBID	PT Panca Budi Idaman Tbk	13 December 2017
64	CAMP	PT Campina Ice Cream Industry Tbk.	19 December 2017
65	PCAR	PT Prima Cakrawala Abadi Tbk	29 December 2017

## Appendix 2

## The Items of ICD Index

Intellectual Capital Disclosure	Items
<b>Employees</b> Staff breakdown by age Staff breakdown by seniority Staff breakdown by gender Staff breakdown by nationality Staff breakdown by department Staff breakdown by job function Staff breakdown by level of education Rate of staff turnover Comments on changes in number of employees Staff health and safety Absence Staff interview Statements of policy on competence development Description of competence development Description of competence development program and activities Education and training expenses Education and training expenses/number of employees Recruitment policies HRM department, division or function Job rotation opportunities Career opportunities Remuneration and incentive systems Pensions Insurance policies Statements of dependence on key personnel Revenues/employee Value added/employee	27
<b>Customers</b> Number of customers Sales breakdown by customer Annual sales per segment or product Average customer size Dependence on key customers Description of customer involvement Description of customer relations Education/training of customers Customers/employees Value added per customer or segment Market share (%) Relative market share Market share, breakdown by country/segments/product Repurchase	14
<b>IT</b>	5

Description and reason for investments in IT IT systems Software assets Description of IT facilities IT expenses	
<b>Processes</b> Information and communication within the company Efforts related to the working environment Working from home Internal sharing of knowledge and information External sharing of knowledge and information Measure of internal or external failures Fringe benefits and company and statements/policies Environment approvals and statements/policies	8
<b>Research and Development</b> Statements of policy, strategy and/or objectives of R&D activities R&D expenses R&D expenses/sales R&D invested in basic research R&D invested in product design/development Future prospects regarding R&D Details of company patents Number of patents and licenses etc. Patents pending	9
<b>Strategic Statements</b> Description of new product technology Statements of corporate quality performance Strategic alliances Objectives and reason for strategic alliances Comments on the effects of the strategic alliances Description of the network of suppliers and distributors Statements of image and brand Corporate culture statements Best practice Organizational structure Utilization of energy, raw materials and other input goods Investment in the environment Description of community involvement Information on corporate social responsibility and objective Description of employees contracts/contractual issues	15
<b>Total</b>	<b>78</b>

Sources: Bukh et al. (2005)







75	0	1	1	0	1	1	1	0	0
76	0	1	1	0	1	0	1	1	1
77	1	1	1	0	1	1	1	1	1
78	0	1	1	1	1	1	1	1	1

Indicator	KRAS	ICBP	HRUM	BRAU	IPOL	ROTI	BIPI	BAJA	GEMS
1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1
3	0	0	0	0	0	0	0	0	0
4	1	1	1	1	0	0	1	1	1
5	1	0	0	0	0	0	0	0	0
6	1	0	1	1	0	0	0	0	0
7	1	1	1	1	1	1	1	1	1
8	0	0	0	0	0	0	0	1	0
9	0	0	0	0	0	0	0	1	0
10	1	1	1	1	1	1	1	1	1
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1
15	1	1	1	0	1	1	0	1	1
16	0	0	0	1	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	1	1	1	1	1	1	0	1	1
19	1	1	1	1	1	1	1	1	1
20	0	0	0	1	0	0	0	1	1
21	0	1	1	1	1	0	0	1	1
22	1	1	1	1	1	1	1	1	1
23	1	1	1	1	0	1	1	0	0
24	1	1	1	1	1	1	1	1	1
25	1	0	1	0	1	0	0	0	0
26	0	0	0	0	1	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	1	1	1	1	0	1	0	1	0
29	1	1	1	1	0	1	0	1	1
30	1	1	1	1	1	1	1	1	1
31	0	0	0	0	0	0	0	0	0
32	1	1	1	0	0	0	0	1	0
33	1	1	1	0	0	0	0	1	0
34	1	0	0	1	1	1	0	1	1



74	1	1	1	1	1	1	1	1	1
75	0	1	1	1	1	0	1	0	1
76	1	1	1	1	0	0	1	1	1
77	1	1	1	1	1	1	1	1	1
78	1	1	1	1	1	1	1	1	1

Indicator	ARII	SMRU	STAR	ALDO	SIMP	JAWA	MBTO	WIIM	BSSR
1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1
3	0	0	0	0	0	0	0	0	0
4	1	0	1	1	1	0	1	0	1
5	0	0	0	0	0	0	0	0	0
6	0	1	0	0	0	0	0	0	0
7	1	1	1	1	1	1	1	1	1
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	1	1	1	1	1	1	1	1	1
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1
15	0	1	1	1	0	1	1	1	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	1	0	1	0	0	1	1	1	1
19	1	1	1	1	1	1	1	1	1
20	0	0	0	0	0	0	0	1	0
21	0	0	0	1	1	1	1	1	0
22	1	1	1	1	1	1	1	1	1
23	0	0	0	0	1	1	1	1	1
24	1	1	1	1	1	1	1	1	1
25	0	0	0	1	0	1	0	1	1
26	0	0	0	1	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	1	1	1	1	1	1	1	0	1
29	1	1	1	1	1	1	1	1	1
30	1	1	1	1	1	1	1	1	1
31	0	0	0	0	0	0	0	0	0
32	1	1	0	1	0	0	1	0	1
33	1	1	0	0	0	1	1	1	1





73	1	1	1	1	1	1	1	1	1
74	1	1	1	1	1	1	1	1	1
75	1	1	0	1	1	1	1	1	1
76	0	1	1	0	1	1	1	1	1
77	1	1	1	1	1	1	1	1	1
78	1	1	1	1	1	1	1	1	1

Indicator	PALM	ALTO	TOBA	TRIS	ESSA	SIDO	SSMS	KRAH	SMBR
1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1
3	0	0	0	0	0	0	0	0	0
4	1	1	1	1	1	0	1	1	1
5	0	1	0	0	0	0	0	1	0
6	0	1	0	0	0	0	1	1	0
7	1	1	1	1	1	1	1	1	1
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	1	1	0	1	1	1	1	1	1
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1
15	1	0	1	0	1	1	0	1	1
16	0	0	0	1	0	0	1	0	1
17	0	0	0	0	0	0	0	0	0
18	0	1	1	0	0	1	1	1	1
19	1	1	1	1	1	1	1	1	1
20	0	0	0	0	0	0	0	0	0
21	1	0	1	0	0	1	0	0	0
22	1	1	1	1	1	1	1	1	1
23	1	1	0	1	0	1	1	0	1
24	1	1	1	1	1	1	1	1	1
25	1	0	1	1	1	0	0	1	0
26	0	0	0	0	1	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	1	1	1	1	1	0	1	1	0
29	1	1	1	1	1	0	1	1	1
30	1	1	1	0	1	1	1	1	1
31	0	0	1	0	0	0	0	0	0
32	0	1	0	0	1	0	1	0	0

33	1	0	1	1	1	0	1	1	1
34	1	1	1	1	1	1	1	1	1
35	0	0	1	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0
38	1	0	0	0	0	1	1	0	1
39	1	0	0	1	0	1	1	0	0
40	1	0	0	0	0	1	1	0	1
41	1	1	0	0	1	0	1	1	0
42	0	1	1	0	0	1	1	1	0
43	0	1	0	0	0	0	0	0	1
44	1	1	0	0	0	1	0	1	0
45	0	1	0	0	0	0	0	0	0
46	1	0	0	0	0	0	1	0	0
47	1	1	1	1	1	1	1	1	1
48	1	1	1	1	1	1	1	1	1
49	0	0	0	0	0	0	0	0	0
50	1	1	1	1	1	1	1	1	1
51	1	1	1	1	1	1	1	1	1
52	1	1	1	1	1	1	1	1	1
53	1	1	1	1	1	1	1	1	1
54	1	1	1	1	1	1	1	1	1
55	1	1	0	1	1	1	1	0	1
56	0	0	0	0	1	0	1	0	1
57	0	0	0	0	0	0	0	0	0
58	1	1	0	1	1	1	1	0	1
59	0	1	0	1	1	1	0	0	1
60	0	0	0	1	1	0	0	0	0
61	0	1	0	1	1	1	0	1	1
62	0	1	0	1	1	1	0	1	1
63	0	0	0	0	0	0	0	0	0
64	0	1	0	0	1	0	0	1	1
65	1	1	1	1	1	1	1	1	1
66	1	1	1	1	1	1	1	1	1
67	1	1	1	1	1	1	1	1	1
68	1	1	1	1	1	1	1	1	1
69	1	1	0	1	1	1	1	1	1
70	0	1	1	1	1	1	0	1	1
71	0	0	1	0	0	0	1	1	0



32	0	1	1	0	0	0	1	0	0
33	1	1	1	1	0	1	0	1	0
34	1	1	1	1	0	1	1	1	1
35	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0
38	0	1	1	0	0	0	0	1	0
39	0	1	1	0	0	0	0	1	0
40	0	1	0	0	0	0	0	1	0
41	0	1	1	1	0	0	1	1	0
42	0	1	1	1	0	1	0	0	0
43	0	1	1	1	0	0	0	0	0
44	0	0	1	1	0	0	1	0	0
45	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0
47	1	1	1	1	1	1	1	1	1
48	1	1	1	1	1	1	1	1	1
49	0	0	0	0	0	0	0	0	0
50	1	1	1	1	1	1	1	1	1
51	1	1	1	1	1	1	1	1	1
52	1	1	1	1	1	1	1	1	1
53	1	1	1	1	1	1	1	1	1
54	1	1	1	1	1	1	1	1	1
55	1	1	1	0	0	1	1	1	0
56	0	0	0	0	0	0	0	1	0
57	0	0	0	0	0	0	0	0	0
58	1	1	1	0	0	0	1	1	0
59	1	0	1	1	0	1	0	1	0
60	1	0	1	0	0	1	0	0	0
61	1	1	1	1	0	1	0	1	0
62	1	1	1	1	0	1	0	1	0
63	1	1	1	0	0	1	0	0	1
64	0	0	1	1	0	0	0	0	1
65	1	1	1	1	0	1	1	1	1
66	1	1	1	1	1	1	1	1	1
67	1	1	1	1	1	1	1	1	1
68	1	1	1	1	1	0	1	1	0
69	1	1	1	1	0	1	1	1	1
70	1	1	1	1	0	1	1	1	1







70	1	1	1	1	1	1	1	1	0
71	1	1	1	1	1	1	1	0	0
72	1	1	1	1	1	1	1	1	1
73	1	1	1	1	1	1	1	1	1
74	1	1	1	1	1	1	1	1	1
75	1	1	0	1	0	1	1	1	1
76	1	0	0	1	0	0	1	0	0
77	1	1	1	0	1	1	1	1	1
78	1	1	1	1	1	1	1	1	1

Indicator	KMTR	HRTA	WOOD	HOKI	MARK	MDKI	BELL	ZINC	PBID
1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1
3	0	0	0	0	0	0	0	0	0
4	1	1	1	0	1	1	1	1	1
5	0	1	0	0	0	1	1	0	0
6	0	1	1	0	0	1	1	0	1
7	1	1	1	1	1	1	1	1	1
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	1	1	1	1	1	1	1	1	1
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1
15	0	0	0	0	0	0	1	0	1
16	0	0	0	0	1	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	1	1	1	0	0	1	1	1	1
19	1	1	1	1	1	1	1	1	1
20	0	0	0	0	0	1	0	1	0
21	1	1	0	0	0	0	0	1	0
22	1	1	1	1	1	1	1	1	1
23	1	1	1	1	0	1	1	0	1
24	1	1	1	1	1	1	1	1	1
25	0	0	1	1	0	1	1	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	1	0
28	1	1	1	1	1	1	1	1	1
29	1	0	1	1	0	0	1	1	0

30	1	1	1	1	1	1	1	1	1
31	1	0	0	0	0	0	1	0	0
32	1	0	1	0	1	0	0	0	0
33	1	1	1	0	1	0	1	0	1
34	1	1	1	1	1	1	1	1	1
35	1	1	0	0	0	0	0	0	0
36	1	0	0	0	0	0	0	0	0
37	1	1	0	0	0	0	0	0	0
38	1	1	1	1	1	1	0	0	1
39	1	1	0	0	0	1	1	0	1
40	1	1	0	0	0	0	0	0	0
41	1	0	1	1	0	0	1	1	0
42	0	0	0	1	0	0	0	0	1
43	1	1	0	0	0	0	0	0	1
44	0	1	0	1	1	0	1	1	0
45	0	0	0	1	0	0	0	0	1
46	0	0	0	1	1	0	1	0	0
47	1	1	1	1	1	1	1	1	1
48	1	1	1	1	1	1	1	1	1
49	0	0	0	0	0	0	0	0	0
50	1	1	1	1	1	1	1	1	1
51	1	1	1	1	1	1	1	1	1
52	1	1	1	1	1	1	1	1	1
53	1	1	1	1	1	1	1	1	1
54	1	1	1	1	1	1	1	1	1
55	0	1	0	0	1	1	1	0	1
56	0	1	0	0	1	0	0	0	1
57	0	0	0	0	0	1	0	0	0
58	0	1	0	0	1	1	0	0	1
59	0	1	0	0	1	1	1	0	1
60	0	1	0	0	0	0	0	0	1
61	1	1	1	1	1	1	1	0	1
62	1	1	1	1	1	1	1	0	1
63	1	0	0	0	1	0	1	1	1
64	1	1	1	0	0	1	1	0	1
65	1	1	1	1	1	1	1	1	1
66	1	1	1	1	1	1	1	1	1
67	1	1	1	1	1	1	1	1	1
68	1	0	1	0	0	1	1	0	1

69	1	1	1	1	1	1	1	1	1
70	1	1	0	1	1	1	1	1	1
71	1	1	1	1	1	1	1	1	1
72	1	1	1	1	1	1	1	1	1
73	1	1	1	1	1	1	1	1	1
74	1	1	1	1	1	1	0	1	1
75	1	0	1	0	0	1	0	0	1
76	1	0	0	0	0	0	0	1	1
77	1	1	1	1	1	1	1	1	1
78	1	1	1	1	1	1	1	1	1

Indicator	CAMP	PCAR
1	1	1
2	1	1
3	0	0
4	1	1
5	1	0
6	1	0
7	1	1
8	0	0
9	0	0
10	1	1
11	0	0
12	0	0
13	1	1
14	1	1
15	1	0
16	0	0
17	0	0
18	0	0
19	1	1
20	0	0
21	1	0
22	1	1
23	1	0
24	1	1
25	1	0
26	0	0
27	0	0

28	0	1
29	0	1
30	0	1
31	0	0
32	0	0
33	0	1
34	1	1
35	0	0
36	0	0
37	0	0
38	1	1
39	1	0
40	0	0
41	0	1
42	1	0
43	1	0
44	1	0
45	1	0
46	0	0
47	1	1
48	1	1
49	1	0
50	1	1
51	1	1
52	1	1
53	1	1
54	1	1

55	1	1
56	0	1
57	0	0
58	1	1
59	1	0
60	1	1
61	1	1
62	1	1
63	1	0
64	0	0
65	1	1
66	1	1
67	1	1
68	1	1
69	1	1
70	1	1
71	1	0
72	1	1
73	1	1
74	1	1
75	1	0
76	1	1
77	1	0
78	1	0

## The Recapitulation of ICD Index

Code	Number of Disclosure	ICD index (%)	ICD index
SIAP	33	42%	0.4231
BYAN	37	47%	0.4744
GZCO	41	53%	0.5256
YPAS	29	37%	0.3718
NIKL	41	53%	0.5256
BWPT	44	56%	0.5641
GTBO	36	46%	0.4615
BRMS	39	50%	0.5000
BORN	38	49%	0.4872
KRAS	53	68%	0.6795
ICBP	51	65%	0.6538
HRUM	43	55%	0.5513
BRAU	43	55%	0.5513
IPOL	39	50%	0.5000
ROTI	41	53%	0.5256
BIPI	30	38%	0.3846
BAJA	49	63%	0.6282
GEMS	36	46%	0.4615
ARII	39	50%	0.5000
SMRU	35	45%	0.4487
STAR	33	42%	0.4231
ALDO	46	59%	0.5897
SIMP	53	68%	0.6795
JAWA	44	56%	0.5641
MBTO	58	74%	0.7436
WIIM	54	69%	0.6923
BSSR	41	53%	0.5256
PALM	46	59%	0.5897
ALTO	49	63%	0.6282
TOBA	42	54%	0.5385
TRIS	43	55%	0.5513
ESSA	48	62%	0.6154
SIDO	45	58%	0.5769
SSMS	49	63%	0.6282
KRAH	46	59%	0.5897

SMBR	48	62%	0.6154
SRIL	41	53%	0.5256
DSNG	52	67%	0.6667
ANJT	53	68%	0.6795
ISSP	46	59%	0.5897
MAGP	25	32%	0.3205
IMPC	42	54%	0.5385
MBAP	41	53%	0.5256
CINT	42	54%	0.5385
DAJK	32	41%	0.4103
WTON	53	68%	0.6795
KINO	55	71%	0.7051
AMIN	39	50%	0.5000
DPUM	39	50%	0.5000
BOLT	52	67%	0.6667
WSBP	47	60%	0.6026
AGII	56	72%	0.7179
CLEO	45	58%	0.5769
FIRE	31	40%	0.3974
KMTR	53	68%	0.6795
HRTA	52	67%	0.6667
WOOD	44	56%	0.5641
HOKI	41	53%	0.5256
MARK	44	56%	0.5641
MDKI	48	62%	0.6154
BELL	51	65%	0.6538
ZINC	40	51%	0.5128
PBID	53	68%	0.6795
CAMP	52	67%	0.6667
PCAR	40	51%	0.5128

## 2. The Calculation Result of Ownership Retention

KODE	OwnRet (%)	OwnRet
SIAP	60.00%	0.6000
BYAN	75.00%	0.7500
GZCO	70.00%	0.7000
YPAS	89.82%	0.8982
NIKL	80.00%	0.8000
BWPT	70.00%	0.7000
GTBO	26.61%	0.2661
BRMS	81.84%	0.8184
BORN	75.00%	0.7500
KRAS	78.43%	0.7843
ICBP	80.00%	0.8000
HRUM	81.48%	0.8148
BRAU	90.26%	0.9026
IPOL	64.29%	0.6429
ROTI	85.00%	0.8500
BIPI	61.76%	0.6176
BAJA	77.78%	0.7778
GEMS	85.00%	0.8500
ARII	78.33%	0.7833
SMRU	66.67%	0.6667
STAR	58.30%	0.5830
ALDO	72.73%	0.7273
SIMP	80.00%	0.8000
JAWA	70.00%	0.7000
MBTO	66.82%	0.6682
WIIM	70.00%	0.7000
BSSR	90.00%	0.9000
PALM	86.60%	0.8660
ALTO	73.53%	0.7353
TOBA	89.53%	0.8953
TRIS	70.00%	0.7000
ESSA	68.75%	0.6875
SIDO	90.00%	0.9000
SSMS	83.40%	0.8340
KRAH	71.62%	0.7162
SMBR	76.24%	0.7624
SRIL	69.88%	0.6988
DSNG	87.03%	0.8703
ANJT	90.00%	0.9000

ISSP	59.63%	0.5963
MAGP	55.56%	0.5556
IMPC	68.96%	0.6896
MBAP	78.00%	0.7800
CINT	70.00%	0.7000
DAJK	60.00%	0.6000
WTON	76.53%	0.7653
KINO	84.00%	0.8400
AMIN	77.78%	0.7778
DPUM	59.88%	0.5988
BOLT	80.00%	0.8000
WSBP	60.00%	0.6000
AGII	75.00%	0.7500
CLEO	79.55%	0.7955
FIRE	76.92%	0.7692
KMTR	85.00%	0.8500
HRTA	76.00%	0.7600
WOOD	80.00%	0.8000
HOKI	70.21%	0.7021
MARK	78.95%	0.7895
MDKI	83.00%	0.8300
BELL	79.31%	0.7931
ZINC	87.91%	0.8791
PBID	80.00%	0.8000
CAMP	84.96%	0.8496
PCAR	60.00%	0.6000



## 3. The Calculation Result of Leverage

KODE	TOTAL ASET	TOTAL DEBT	LEVERAGE
SIAP	Rp 96,242,072,000	Rp 62,941,743,000	0.6540
BYAN	Rp 2,833,700,000,000	Rp 2,617,400,000,000	0.9237
GZCO	Rp 1,018,105,800,000	Rp 480,628,000,000	0.4721
YPAS	Rp 138,347,269,000	Rp 92,199,115,000	0.6664
NIKL	Rp 792,222,000,000	Rp 532,517,000,000	0.6722
BWPT	Rp 1,016,499,000,000	Rp 743,341,000,000	0.7313
GTBO	Rp 55,877,000,000	Rp 6,138,000,000	0.1098
BRMS	Rp 15,239,137,000,000	Rp 15,454,961,000,000	1.0142
BORN	Rp 4,342,967,000,000	Rp 4,292,229,000,000	0.9883
KRAS	Rp 12,795,800,000,000	Rp 6,949,000,000,000	0.5431
ICBP	Rp 10,223,893,000,000	Rp 8,599,153,000,000	0.8411
HRUM	Rp 2,288,900,000,000	Rp 1,530,300,000,000	0.6686
BRAU	Rp 12,280,800,000,000	Rp 8,450,700,000,000	0.6881
IPOL	Rp 1,691,645,000,000	Rp 1,381,551,000,000	0.8167
ROTI	Rp 346,978,000,000	Rp 179,138,000,000	0.5163
BIPI	Rp 1,947,360,000,000	Rp 124,009,000,000	0.0637
BAJA	Rp 524,889,000,000	Rp 399,440,000,000	0.7610
GEMS	Rp 1,117,270,000,000	Rp 546,043,000,000	0.4887
ARII	Rp 540,070,000,000	Rp 320,152,000,000	0.5928
SMRU	Rp 193,605,875,000	Rp 123,655,704,000	0.6387
STAR	Rp 477,032,000,000	Rp 191,288,000	0.0004
ALDO	Rp 107,518,325,502	Rp 67,240,396,267	0.6254
SIMP	Rp 21,063,714,000,000	Rp 11,324,636,000,000	0.5376
JAWA	Rp 1,046,889,000,000	Rp 658,537,000,000	0.6290
MBTO	Rp 276,872,000,000	Rp 186,180,000,000	0.6724
WIIM	Rp 741,063,000,000	Rp 456,714,000,000	0.6163
BSSR	Rp 997,628,042,420	Rp 710,508,239,720	0.7122
PALM	Rp 1,614,400,000,000	Rp 945,141,000,000	0.5854
ALTO	Rp 213,201,000,000	Rp 100,894,000,000	0.4732
TOBA	Rp 2,051,093,000,000	Rp 1,506,544,000,000	0.7345
TRIS	Rp 165,246,000,000	Rp 80,925,000,000	0.4897
ESSA	Rp 473,891,000,000	Rp 368,052,000,000	0.7767
SIDO	Rp 2,150,999,000,000	Rp 846,348,000,000	0.3935
SSMS	Rp 2,113,611,000,000	Rp 1,647,570,000,000	0.7795
KRAH	Rp 228,799,000	Rp 192,647,000	0.8420
SMBR	Rp 1,198,586,000,000	Rp 244,448,000,000	0.2039
SRIL	Rp 3,553,786,608,266	Rp 2,230,313,678,982	0.6276

DSNG	Rp	5,141,000,000,000	Rp	3,735,000,000,000	0.7265
ANJT	Rp	4,867,896,552	Rp	3,993,957,441	0.8205
ISSP	Rp	3,291,006,000,000	Rp	2,578,406,000,000	0.7835
MAGP	Rp	734,458,000,000	Rp	508.,188,000,000	0.6919
IMPC	Rp	561,000,000,000	Rp	419,500,000,000	0.7478
MBAP	Rp	646,680,922,680	Rp	499,806,880,880	0.7729
CINT	Rp	262,918,000,000	Rp	77,759,000,000	0.2958
DAJK	Rp	690,124,000,000	Rp	420,522,000,000	0.6093
WTON	Rp	107,043,000,000	Rp	16,035,000,000	0.1498
KINO	Rp	715,725,000,000	Rp	591,992,000,000	0.8271
AMIN	Rp	120,969,000,000	Rp	48,689,000,000	0.4025
DPUM	Rp	310,943,000,000	Rp	254,027,000,000	0.8170
BOLT	Rp	905,953,000,000	Rp	361,615,000,000	0.3992
WSBP	Rp	4,332,409,010,247	Rp	3,001,582,836,895	0.6928
AGII	Rp	4,953,451,000,000	Rp	3,074,583,000,000	0.6207
CLEO	Rp	353,325,000,000	Rp	205,125,000,000	0.5806
FIRE	Rp	333,255,000,000	Rp	253,849,000,000	0.7617
KMTR	Rp	3,806,823,000,000	Rp	2,754,509,000,000	0.7236
HRTA	Rp	1,071,106,000,000	Rp	501,806,000,000	0.4685
WOOD	Rp	3,081,874,210,495	Rp	1,651,841,228,669	0.5360
HOKI	Rp	370,245,134,305	Rp	150,171,012,622	0.4056
MARK	Rp	170,938,000,000	Rp	90,318,000,000	0.5284
MDKI	Rp	331,740,000,000	Rp	88,464,000,000	0.2667
BELL	Rp	387,982,000,000	Rp	196,329,000,000	0.5060
ZINC	Rp	556,844,000,000	Rp	409,879,000,000	0.7361
PBID	Rp	1,353,300,000,000	Rp	561,800,000,000	0.4151
CAMP	Rp	1,031,041,000,000	Rp	478,204,000,000	0.4638
PCAR	Rp	42,637,000,000	Rp	68,407,000,000	1.6044

## 4. The Calculation Result of Company Size

KODE	TOTAL ASSET	FIRM SIZE (Ln)
SIAP	Rp 96,242,072,000	25.2901
BYAN	Rp 2,833,700,000,000	28.6726
GZCO	Rp 1,018,105,800,000	27.6490
YPAS	Rp 138,347,269,000	25.6530
NIKL	Rp 792,222,000,000	27.3981
BWPT	Rp 1,016,499,000,000	27.6474
GTBO	Rp 55,877,000,000	24.7464
BRMS	Rp 15,239,137,000,000	30.3549
BORN	Rp 4,342,967,000,000	29.0996
KRAS	Rp 12,795,800,000,000	30.1801
ICBP	Rp 10,223,893,000,000	29.9557
HRUM	Rp 2,288,900,000,000	28.4591
BRAU	Rp 12,280,800,000,000	30.1391
IPOL	Rp 1,691,645,000,000	28.1567
ROTI	Rp 346,978,000,000	26.5725
BIPI	Rp 1,947,360,000,000	28.2975
BAJA	Rp 524,889,000,000	26.9865
GEMS	Rp 1,117,270,000,000	27.7419
ARII	Rp 540,070,000,000	27.0150
SMRU	Rp 193,605,875,000	25.9891
STAR	Rp 477,032,000,000	26.8908
ALDO	Rp 107,518,325,502	25.4009
SIMP	Rp 21,063,714,000,000	30.6786
JAWA	Rp 1,046,889,000,000	27.6768
MBTO	Rp 276,872,000,000	26.3468
WIIM	Rp 741,063,000,000	27.3314
BSSR	Rp 997,628,042,420	27.6286
PALM	Rp 1,614,400,000,000	28.1100
ALTO	Rp 213,201,000,000	26.0855
TOBA	Rp 2,051,093,000,000	28.3494
TRIS	Rp 165,246,000,000	25.8307
ESSA	Rp 473,891,000,000	26.8842
SIDO	Rp 2,150,999,000,000	28.3970
SSMS	Rp 2,113,611,000,000	28.3794
KRAH	Rp 228,799,000	19.2484
SMBR	Rp 1,198,586,000,000	27.8122
SRIL	Rp 3,553,786,608,266	28.8990
DSNG	Rp 5,141,000,000,000	29.2683
ANJT	Rp 4,867,896,552	22.3059
ISSP	Rp 3,291,006,000,000	28.8222
MAGP	Rp 734,458,000,000	27.3224
IMPC	Rp 561,000,000,000	27.0530
MBAP	Rp 646,680,922,680	27.1951
CINT	Rp 262,918,000,000	26.2951

DAJK	Rp	690,124,000,000	27.2601
WTON	Rp	107,043,000,000	25.3965
KINO	Rp	715,725,000,000	27.2966
AMIN	Rp	120,969,000,000	25.5188
DPUM	Rp	310,943,000,000	26.4629
BOLT	Rp	905,953,000,000	27.5323
WSBP	Rp	4,332,409,010,247	29.0971
AGII	Rp	4,953,451,000,000	29.2311
CLEO	Rp	353,325,000,000	26.5907
FIRE	Rp	333,255,000,000	26.5322
KMTR	Rp	3,806,823,000,000	28.9678
HRTA	Rp	1,071,106,000000	27.6997
WOOD	Rp	3,081,874,210,495	28.7566
HOKI	Rp	370,245,134,305	26.6374
MARK	Rp	170,938,000,000	25.8646
MDKI	Rp	331,740,000,000	26.5276
BELL	Rp	387,982,000,000	26.6842
ZINC	Rp	556,844,000,000	27.0456
PBID	Rp	1,353,300,000,000	27.9336
CAMP	Rp	1,031,041,000,000	27.6616
PCAR	Rp	42,637,000,000	24.4760

## 5. The Calculation Result of Company Age

CODE	Standing Date	Listing Date	Age (Days)	Age (Ln)
SIAP	05 October 1994	17 October 2008	5,126	8.5421
BYAN	07 October 2004	12 August 2008	1,405	7.2478
GZCO	10 August 2001	15 May 2008	2,470	7.8120
YPAS	14 December 1995	05 March 2008	4,465	8.4040
NIKL	19 August 1982	14 December 2009	9,979	9.2082
BWPT	06 Nopember 2000	17 October 2009	3,267	8.0916
GTBO	10 June 1996	09 July 2009	4,777	8.4716
BRMS	06 August 2003	09 December 2010	2,682	7.8943
BORN	15 March 2006	26 Nopember 2010	1,717	7.4483
KRAS	27 October 1971	10 Nopember 2010	14,259	9.5651
ICBP	02 September 2009	07 October 2010	400	5.9915
HRUM	12 October 1995	06 October 2010	5,473	8.6076
BRAU	07 September 2005	19 August 2010	1,807	7.4994
IPOL	24 March 1995	09 July 2010	5,586	8.6280
ROTI	08 March 1995	28 June 2010	5,591	8.6289
BIPI	19 April 2007	11 February 2010	1,029	6.9363
BAJA	04 October 1993	21 December 2011	6,652	8.8027
GEMS	13 March 1997	17 Nopember 2011	5,362	8.5871
ARII	26 January 2007	08 Nopember 2011	1,747	7.4657
SMRU	11 Nopember 2003	10 October 2011	2,890	7.9690
STAR	19 May 2008	13 July 2011	1,150	7.0475
ALDO	31 January 1989	12 July 2011	8,197	9.0115
SIMP	12 August 1992	09 June 2011	6,875	8.8356
JAWA	01 May 1968	30 May 2011	15,734	9.6636
MBTO	01 June 1977	13 January 2011	12,279	9.4156
WIIM	14 December 1994	18 December 2012	6,579	8.7916
BSSR	31 October 1990	08 Nopember 2012	8,044	8.9927
PALM	02 Nopember 2006	08 October 2012	2,167	7.6811
ALTO	03 June 1997	10 July 2012	5,516	8.6154
TOBA	03 August 2007	06 July 2012	1,799	7.4950
TRIS	13 December 2004	28 June 2012	2,754	7.9208
ESSA	24 March 2006	01 February 2012	2,140	7.6686
SIDO	18 March 1975	18 December 2013	14,155	9.5578
SSMS	22 Nopember 1995	12 December 2013	6,595	8.7941
KRAH	18 August 1990	08 Nopember 2013	8,483	9.0458
SMBR	14 Nopember 1974	28 June 2013	14,106	9.5544
SRIL	22 May 1978	17 June 2013	12,810	9.4580
DSNG	29 September 1980	14 June 2013	11,946	9.3882
ANJT	16 April 1993	08 May 2013	7,327	8.8993
ISSP	30 January 1971	22 February 2013	15,364	9.6398
MAGP	13 April 2005	16 January 2013	2,835	7.9498
IMPC	26 January 1981	17 December 2014	12,378	9.4237
MBAP	29 May 1992	10 July 2014	8,077	8.9968
CINT	15 June 1978	27 June 2014	13,161	9.4850



DAJK	05 May 1997	14 May 2014	6,218	8.7352
WTON	11 March 1997	08 April 2014	6,237	8.7383
KINO	08 February 1999	11 December 2015	6,150	8.7242
AMIN	24 March 1972	10 December 2015	15,966	9.6782
DPUM	11 June 2012	08 December 2015	1,275	7.1507
BOLT	15 March 1982	07 July 2015	12,167	9.4065
WSBP	07 October 2014	20 September 2016	714	6.5709
AGII	21 September 1971	28 September 2016	16,444	9.7077
CLEO	10 March 1988	05 May 2017	10,648	9.2731
FIRE	16 February 2015	09 June 2017	844	6.7382
KMTR	25 March 1991	19 June 2017	9,583	9.1677
HRTA	29 March 2004	21 June 2017	4,832	8.4830
WOOD	19 May 1989	21 June 2017	10,260	9.2360
HOKI	16 September 2003	22 June 2017	5,028	8.5228
MARK	10 April 2002	12 July 2017	5,572	8.6255
MDKI	17 March 1981	25 September 2017	13,341	9.4986
BELL	11 January 1971	03 October 2017	17,067	9.7449
ZINC	12 July 2005	16 October 2017	4,479	8.4072
PBID	10 January 1990	13 December 2017	10,199	9.2300
CAMP	02 September 1994	19 December 2017	8,509	9.0489
PCAR	29 January 2014	29 December 2017	1,430	7.2654



## 6. The Calculation Result of Underwriter Reputation

KODE	UNDERWRITER	Und
SIAP	Asia Kapitalindo Securities, Antaboga Delta Sekuritas Indonesia	0
BYAN	Trimegah Securities Tbk	1
GZCO	CLSA Indonesia, Semesta Indovest	1
YPAS	Investindo Nusantara Sekuritas, BNI Sekuritas, Panca Global Securities	1
NIKL	Bahana Securities	1
BWPT	BNP Baribas Securities Indonesia, Danareksa Sekuritas	1
GTBO	Bahana Securities	1
BRMS	Danatama Makmur dan Nomura	0
BORN	CIMB Sekuritas Indonesia	1
KRAS	Bahana Securities, Danareksa Sekuritas, Mandiri Sekuritas	1
ICBP	Kim Eng Securities, Credit Suisse Securities Indonesia, Deutsche Securities Indonesia, Mandiri Sekuritas	1
HRUM	Ciptadana Securities, Mandiri Sekuritas	1
BRAU	Danatama Makmur, Recapital	0
IPOL	OSK Nusadana Securities Indonesia	0
ROTI	OSK Nusadana Securities Indonesia	0
BIPI	Danatama Makmur	0
BAJA	Makinta Securities	0
GEMS	Sinarmas Sekuritas	0
ARII	Indopremier Sekuritas, UBS Securities Indonesia	1
SMRU	Andalan Artha Advisindo Sekuritas	0
STAR	Andalan Artha Advisindo Sekuritas	0
ALDO	Erdikha Elit Sekuritas	0
SIMP	Kim Eng Securities, Deutsche Securities Indonesia, Mandiri Sekuritas	1
JAWA	Mandiri Sekuritas, OSK Nusadana Securities Indonesia	1
MBTO	Trimegah Securities Tbk	1
WIIM	Mandiri Sekuritas, OSK Nusadana Securities Indonesia	1
BSSR	CIMB Sekuritas Indonesia	1
PALM	Indopremier Sekuritas, DBS Vickers Securities Indonesia	1
ALTO	Valbury Asia Securities	1
TOBA	Mandiri Sekuritas, Morgan Stanley Asia Indonesia, CLSA Indonesia	1
TRIS	Sinarmas Sekuritas	0
ESSA	Equator Securities	0
SIDO	Kresna Graha Sekurindo, Mandiri Sekuritas	1
SSMS	BNP Baribas Securities Indonesia, Mandiri Sekuritas, RHB OSK Securities Indonesia	1
KRAH	Andalan Artha Advisindo Sekuritas, Investindo Nusantara Sekuritas	0
SMBR	Bahana Securities, Danareksa Sekuritas, Mandiri Sekuritas	1

SRIL	Bahana Securities	1
DSNG	Ciptadana Securities, BCA Sekuritas	0
ANJT	Bahana Securities	1
ISSP	Andalan Artha Advisindo Sekuritas	0
MAGP	Brent Securities	0
IMPC	Ciptadana Securities	0
MBAP	Danareksa Sekuritas, Sucorinvest Central Gani	1
CINT	Danareksa Sekuritas, Sinarmas Sekuritas	1
DAJK	Valbury Asia Securities, Sucorinvest Swntrol Gani	1
WTON	Bahana Securities, Danareksa Sekuritas, Mandiri Sekuritas, Sucorinvest Swntrol Gani	1
KINO	Deutsche Securities Indonesia, Credit Suisse Securities Indonesia, Indo Premier Securities	1
AMIN	Panin Sekuritas Tbk	0
DPUM	DBS Vickers Securities Indonesia, Sucorinvest Central Gani, BNI Securities	1
BOLT	RHB OSK Securities Indonesia	1
WSBP	Bahana Securities, BNI Securities, Danareksa Sekuritas, Mandiri Sekuritas	1
AGII	DBS Vickers Securities Indonesia, Mandiri Securities, RHB Securities Indonesia	1
CLEO	Lautandhana Securindo	0
FIRE	Ciptadana Sekuritas Asia, Lautandhana Sekurindo	0
KMTR	Trimegah Securities Tbk	0
HRTA	Mandiri Sekuritas, MNC Sekuritas, RHB Sekuritas Indonesia	1
WOOD	Bahana Sekuritas, BCA Sekuritas, DBS Vickers Sekuritas Indonesia	1
HOKI	Bahana Sekuritas, RHB Sekuritas Indonesia, Trimegah Sekuritas Indonesia	1
MARK	Panin Sekuritas Tbk	0
MDKI	Yuanta Sekuritas Indonesia	0
BELL	Lotus Andalan Sekuritas	1
ZINC	Erdikha Elit Sekuritas	0
PBID	Bahana Sekuritas, BCA Sekuritas, CIMB Sekuritas Indonesia	1
CAMP	Shinhan Sekuritas Indonesia	0
PCAR	Artha Sekuritas Indonesia, Lotus Andalan Sekuritas	0

## Appendix 4

## Descriptive Statistics of Variables

	N	Minimum	Maximum	Mean	Std. Deviation
ICD	65	,32	,74	,5623	,09366
OwnRet	65	,27	,90	,7491	,11062
Lev	65	,11	1,60	,6369	,23306
Size	65	19,25	30,68	27,2278	1,84378
Age	65	5,99	9,74	8,5398	,89557
Valid N (listwise)	65				

## Appendix 5

## The Result of Normality Test of Data

		ICD	OwnRet	Lev	Size	Age
N		65	65	65	65	65
Normal Parameters <sup>a,b</sup>	Mean	,5623	,7491	,6369	27,2278	8,5398
	Std. Deviation	,09366	,11062	,23306	1,84378	,89557
Most Extreme Differences	Absolute	,083	,103	,113	,093	,132
	Positive	,052	,083	,113	,057	,089
	Negative	-,083	-,103	-,071	-,093	-,132
Kolmogorov-Smirnov Z		,668	,834	,907	,749	1,065
Asymp. Sig. (2-tailed)		,764	,490	,383	,628	,207

a. Test distribution is Normal.

b. Calculated from data.

Appendix 6

The Result of Normality Test of Model

**One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		65
Normal Parameters <sup>a,b</sup>	Mean	,0000000
	Std. Deviation	,08006789
Most Extreme Differences	Absolute	,074
	Positive	,074
	Negative	-,057
Kolmogorov-Smirnov Z		,594
Asymp. Sig. (2-tailed)		,872

a. Test distribution is Normal.

b. Calculated from data.

Appendix 7

The Result of Multiple Linear Regression Analysis

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,562 <sup>a</sup>	,315	,257	,08072

a. Predictors: (Constant), Underwriter, Leverage, Ownership Retention, Age, Size

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,177	5	,035	5,434	,000 <sup>a</sup>
	Residual	,384	59	,007		
	Total	,561	64			

a. Predictors: (Constant), Underwriter Reputation, Ownership Retention, Company Age, Company Size, Leverage

b. Dependent Variable: ICD

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
	1 (Constant)	-,065	,200		
OwnRet	,204	,097	,241	2,093	,041
Lev	,009	,049	,024	,192	,848
Size	,004	,006	,082	,711	,480
Age	,039	,013	,370	3,015	,004
Und	,043	,021	,227	1,993	,051

a. Dependent Variable: ICD

## Appendix 8

## The Result of Multicollinearity Test

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
	1 (Constant)	-,065	,200				-,326
OwnRet	,204	,097	,241	2,093	,041	,878	1,139
Lev	,009	,049	,024	,192	,848	,774	1,292
Size	,004	,006	,082	,711	,480	,875	1,143
Age	,039	,013	,370	3,015	,004	,770	1,299
Und	,043	,021	,227	1,993	,051	,898	1,114

a. Dependent Variable: ICD

## Appendix 9

## The Result of Heteroscedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	,078	,108		,720	,474
OwnRet	,038	,053	,097	,717	,476
Lev	,029	,027	,159	1,107	,273
Size	-,002	,003	-,091	-,673	,503
Age	-,001	,007	-,030	-,210	,835
Und	,016	,012	,186	1,394	,168

a. Dependent Variable: AbsRes

## Appendix 10

## Sensitivity Analysis

**Sort by Ownership Retention**

Variable	Prediction	Coefficients	t-statistic	Sig.	Note	Total Data
<b>Panel A - Ownership Retention with high level</b>						
Constant		0.132	0.267	0.396		
OwnRet	Positive	-0.219	-0.632	0.267	Ha Rejected	Ha Accepted
Lev	Positive	0.040	0.389	0.351	Ha Rejected	Ha Rejected
Size	Positive	0.011	1.263	0.109	Ha Rejected	Ha Rejected
Age	Positive	0.032	1.521	0.070	Ha Accepted	Ha Accepted
Und	Positive	0.022	0.769	0.225	Ha Rejected	Ha Accepted
<b>Panel B - Ownership Retention with low level</b>						
Constant		0.180	0.665	0.256		
OwnRet	Positive	0.398	2.495	0.010	Ha Accepted	Ha Accepted
Lev	Positive	0.026	0.559	0.291	Ha Rejected	Ha Rejected
Size	Positive	-0.009	-1.061	0.150	Ha Rejected	Ha Rejected
Age	Positive	0.034	2.048	0.026	Ha Accepted	Ha Accepted
Und	Positive	0.065	2.048	0.026	Ha Accepted	Ha Accepted



**Sort by Leverage**

Variable	Prediction	Coefficients	t-statistic	Sig.	Note	Total Data
<b>Panel A - Leverage with high level</b>						
Constant		-0.274	-0.683	0.250		
OwnRet	Positive	0.138	0.839	0.205	Ha Rejected	Ha Accepted
Lev	Positive	0.100	0.944	0.177	Ha Rejected	Ha Rejected
Size	Positive	0.011	1.023	0.158	Ha Rejected	Ha Rejected
Age	Positive	0.038	1.947	0.031	Ha Accepted	Ha Accepted
Und	Positive	0.044	1.251	0.111	Ha Rejected	Ha Accepted
<b>Panel B - Leverage with low level</b>						
Constant		0.007	0.026	0.490		
OwnRet	Positive	0.291	2.181	0.019	Ha Accepted	Ha Accepted
Lev	Positive	0.011	0.132	0.448	Ha Rejected	Ha Rejected
Size	Positive	-0.003	-0.369	0.358	Ha Rejected	Ha Rejected
Age	Positive	0.044	2.453	0.011	Ha Accepted	Ha Accepted
Und	Positive	0.062	2.123	0.022	Ha Accepted	Ha Accepted

**Sort by Company Size**

Variable	Prediction	Coefficients	t-statistic	Sig.	Note	Total Data
<b>Panel A - Company Size with large scale</b>						
Constant		-0.733	-1.571	0.064		
OwnRet	Positive	0.137	0.917	0.184	Ha Rejected	Ha Accepted
Lev	Positive	-0.044	-0.648	0.262	Ha Rejected	Ha Rejected
Size	Positive	0.032	2.073	0.024	Ha Accepted	Ha Rejected
Age	Positive	0.034	2.513	0.010	Ha Accepted	Ha Accepted
Und	Positive	0.044	1.563	0.065	Ha Accepted	Ha Accepted
<b>Panel B - Company Size with small scale</b>						
Constant		0.193	0.584	0.282		
OwnRet	Positive	0.209	1.532	0.069	Ha Accepted	Ha Accepted
Lev	Positive	0.034	0.596	0.279	Ha Rejected	Ha Rejected
Size	Positive	-0.010	-1.014	0.160	Ha Rejected	Ha Rejected
Age	Positive	0.050	2.243	0.017	Ha Accepted	Ha Accepted
Und	Positive	0.040	1.238	0.114	Ha Rejected	Ha Accepted

**Sort by Company Age**

Variable	Prediction	Coefficients	t-statistic	Sig.	Note	Total Data
<b>Panel A - Company Age with the older</b>						
Constant		0,324	0.708	0.243		
OwnRet	Positive	0.260	1.418	0.084	Ha Accepted	Ha Accepted
Lev	Positive	-0.028	-0.357	0.362	Ha Rejected	Ha Rejected
Size	Positive	0.004	0.497	0.312	Ha Rejected	Ha Rejected
Age	Positive	-0.001	-0.016	0.494	Ha Rejected	Ha Accepted
Und	Positive	0.004	0.147	0.442	Ha Rejected	Ha Accepted
<b>Panel B - Company Age with younger</b>						
Constant		0.079	0.195	0.424		
OwnRet	Positive	0.100	0.790	0.219	Ha Rejected	Ha Accepted
Lev	Positive	0.029	0.562	0.290	Ha Rejected	Ha Rejected
Size	Positive	0.008	0.718	0.240	Ha Rejected	Ha Rejected
Age	Positive	0.010	0.447	0.329	Ha Rejected	Ha Accepted
Und	Positive	0.056	1.997	0.028	Ha Accepted	Ha Accepted

**Sort by Underwriter Reputation**

Variable	Prediction	Coefficients	t-statistic	Sig.	Note	Total Data
<b>Panel A - Reputable Underwriter</b>						
Constant		0.196	0.556	0.292		
OwnRet	Positive	0.163	1.103	0.140	Ha Rejected	Ha Accepted
Lev	Positive	-0.050	-0.522	0.303	Ha Rejected	Ha Rejected
Size	Positive	0.005	0.525	0.302	Ha Rejected	Ha Rejected
Age	Positive	0.016	0.788	0.219	Ha Rejected	Ha Accepted
<b>Panel B - Unreputable Underwriter</b>						
Constant		-0.085	-0.388	0.351		
OwnRet	Positive	0.359	2.557	0.009	Ha Accepted	Ha Accepted
Lev	Positive	0.044	1.001	0.163	Ha Rejected	Ha Rejected
Size	Positive	-0.004	-0.511	0.307	Ha Rejected	Ha Rejected
Age	Positive	0,049	3.053	0.003	Ha Accepted	Ha Accepted
Und	Positive	0.056	1.574	0.064	Ha Accepted	Ha Accepted