CHAPTER I
INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Industrial revolution has changed ways of doing business. The industrial revolution started in 1760 where all hand production methods slowly changed into machines production. This transition had grew more powerful each time as new inventions and manufacturing processes added to the efficiency of machines and increased productivity. The way of industrial revolution influenced every aspects of life caused many businesses successfully expanded their business into global market. One of the biggest effects to this industrial revolution can be seen along with the way of trading their products around the world.

The way of trading their products has helped many businesses in maintaining its performance. However, this trading activity still needs some aspects in order to gain better position/condition in global market. It is because the competitive amongst firms is not only based the total output of its product but also the way of innovations, information systems, management organization and its resources. This kind of competition requires business to transform from labor-based business into knowledge-based business.

Labor-based business focuses on the manpower and productivity of the business. Meanwhile, knowledge-based business is the creation of knowledge management that is utilized by the firm to generate profits. The characteristics of knowledge-based business is to process the knowledge into something valuable that can help in increasing business' value continuously (Marr et al., 2004). Moreover, the measurement to this knowledge- based business mainly focuses on the intangible assets. Therefore, traditional accounting method is not applicable in measuring

the market value of knowledge-based business (Gan & Saleh, 2008; Berzkalne & Zelgalve, 2013)). The measurement using traditional accounting method causes distortions in preparing financial statement where the value of knowledge capital is not stated accurately in financial statements and caused the differences between market value and book value to increase over time. This difference can be recognized as hidden value (hidden assets) in financial statement (Pramelasari, 2010). Therefore, the value of intellectual capital will be taken to this context.

Intellectual capital is classified as an intangible asset under PSAK No. 19 after it was revised in 2000. PSAK No. 19 classifies the intangible asset is an identifiable non-monetary asset without physical substance. The identifiable criterion is met when the intangible assets are separable (that is, when it can be sold, transferred or licensed) or where it arises from contractual or other legal rights (PwC Pocket Guide, 2016).

Intellectual capital enables companies to create sustainability for the business in enhancing its competitive advantage through knowledge management, organizational techniques, expertise skills, customer satisfaction. Definitions of intellectual capital are proposed differently by scholars and agreed that intellectual capital creates competitive advantage and representing intangible value of organization. (Yamola et al., 2013).

According to Berzkalne & Zelgalve (2013), intellectual capital is intangible in which the calculation itself is hard to be measured. Intellectual capital comprises of three categories which are human capital, structural capital, and relational capital (Bontis, 1999 in Nimtrakoon, 2014). Human capital refers to the sources acquired by employees such as education, skills, knowledge, experience, attitude and ability achieving their work and organizational goals (Edvinsson & Malone, 1997; Roos et al., 1997; Nimtrakoon, 2014). Structural capital lies within organizational knowledge owned by firm, such as databases, organizational structure, organizational procedures, handbooks, strategies, patents, trademarks, culture and norms (Bontis, 1999; Stewart, 1997; Mitrakoon, 2014).

Relational capital refers to social relations and networks existing between internal and external economic factors such as employees, customers, suppliers, competitors, and government agency (Bontis, 1999; Roos et al., 1997 in Mitrakoon, 2014).

Many studies had shown that the reporting of intellectual capital in annual reports still insignificance. Most of the studies were using content analysis method to investigate the practice of firm in managing and reporting intellectual capital. Furthermore, some of the studies also followed a framework developed by Sveiby (1997) to identify whether intellectual capital relates to an organization's internal structure, external structure, or employee competence within an organization (Guthrie and Petty, 2006). For example, a study of Brennan (2001) indicated that the key components of intellectual capital are hardly recognized in annual reports of companies in Ireland. Brennan (2001) analyzed the annual report of 11 listed companies and 10 private companies using identical framework to identify the contribution of each components of intellectual capital. In other words, the result of Brennan's study stated that the companies were lack of knowledge and inconsistently reported the intellectual capital on its annual reports. (Guthrie and Petty, 2006)

Guthrie and Petty (2006) also conducted similar study of 20 largest listed Australian companies in 1998. Guthrie and Petty also followed similar framework and content analysis method in identifying the reporting of intellectual capital and resulted that firms inconsistently disclosed the value of intellectual capital. Framework developed by Sveiby (1997) helps researchers to identify the total contribution of each components of intellectual capital. The study result of Guthrie and Petty (2006) mentioned that the external capital was highly constituted about 40% of total reporting and the remaining was distributed evenly which are human capital and internal capital. This result actually did not represent the frequently claim made by firm on human capital contributes as the most important resource for a firm. To sum up, the study conducted by Guthrie

and Petty in 1998 showed that there is a gap between the actual disclosure of intellectual capital and the real contribution of intellectual capital of Australian companies.

Later on, Guthrie and Petty performed another comparison study of 50 listed Australian companies and 100 listed Hong Kong companies in 2002. On the second study of Guthrie and Petty (2006), it seems that Australian companies were aware about the importance of disclosing intellectual capital in annual report. The total average of Australian companies indicated that both external capital and internal capital constituted almost 90% are reported in annual reports and the rest was reported as human capital. It had increased over 4 years since the first study in 1998. Furthermore, there is no certain pattern on disclosing intellectual capital on annual reports.

Table 1.1 Disclosure of the elements of Intellectual capital (Australia Company Data

Categories	Percentage
Human Capital	10%
External Capital	49%
Internal Capital	41%

Source: Guthrie and Petty (2006)

Meanwhile, the Hong Kong companies' data had shown that three key components of intellectual capital had distributed evenly. The external capital of Hong Kong companies was seemed to contribute the most in annual reports with 37% of total disclosure.

Table 1.2 Disclosure of the elements of Intellectual capital (Hong Kong Company Data)

Categories	Percentage
Human Capital	35%
External Capital	37%
Internal Capital	28%

Source: Guthrie and Petty (2006)

By following the framework of Sveiby (1997), the study had categorized the elements of annual reports into three key components of intellectual capital. First, both Australian and Hong Kong companies' data had shown that external capital had the largest size in disclosing intellectual capital. External capital itself includes brands, customers, customer satisfaction, company names, distribution channels, business collaboration, licensing agreements. Among those elements, business collaboration was the most frequent elements to be reported in annual report with total 34% of external capital. Second, the internal capital includes intellectual property, management philosophy, corporate culture, management processes, information/networking systems, and financial relations. Management philosophy had the highest reporting frequency among those elements with total 39% of internal capital. Lastly, human capital includes employees, education, training, work-related knowledge, entrepreneurial spirit were the elements taken as the most frequent to be disclosed. Human capital is the least among other components of intellectual capital. The majority of human capital elements to be reported are employees with total 46% of human capital.

Soebyakto et al., (2015) also conducted same research about the disclosure practices of intellectual capital of 131 services companies listed in Indonesia Stock Exchange of 5 years observation from 2009 – 2013. Soebyakto et al., (2015) followed the same framework by Sveiby (1997) using three elements namely internal structure, external structure, and human capital in order to know how much contribution of each elements

of disclosing practice of intellectual capital. The result is presented in the table as follow:

Table 1.3 Disclosure of the elements of Intellectual capital (Indonesia Company Data)

Categories	Percentage
Human Capital	38%
External Capital	24%
Internal Capital	39%

Source: Soebyakto (2015)

From the above table 1.3, it shows that internal capital is more likely to be disclosed rather than the other two elements. This internal capital is divided into intellectual property and infrastructure assets. Among those two categories, management philosophy has the highest reporting frequency and this management philosophy is one of the items in infrastructure assets. However, the overall study concluded that the disclosure practice of intellectual capital is relatively low at 35.20%. This is resulted from the low awareness of the importance of intellectual capital of Indonesian company in creating and sustaining competitive advantage and shareholder value. (Soebyakto et al., 2015)

In response to the importance of intellectual capital valuation, the measurement of intellectual capital can be classified into two categories: non-monetary valuation models and monetary valuation models (Tan et al., 2007; Nimtrakoon, 2014). Non-monetary valuation models of intellectual capital includes Balance Scorecard Method (Kaplan and Norton, 1992); Skandia Value Scheme (Edvinsson and Malone, 1997); Intellectual Capital-Index (Roos et al., 1997); Intangible Asset Monitor Approach (Sveiby, 1997); the IC-dVAL (Bounfour, 2003). On the other hand, monetary valuation models of intellectual capital are Economic Value Added (EVA) (Stewart, 1997): the MVA model (Bontis et al., 1999); Value Added Intellectual Capital (VAIC) (Pulic 1998, 2000)

VAIC is widely-used model aims to monitors and measures the value creation in the company according to accounting based figures. The aim of using VAIC model is to help company in valuing the value added through the efficiency of intellectual capital or intellectual resources (Stahle, Stahle & Aho, 2011). VAIC valuation model consists of three components which are physical capital (VACA – value added capital employed), human capital (VAHU – value added human capital), structural capital (STVA – structural capital value added).

The studies about VAIC valuation model by Chen et al., (2005) found that there is a positive relationship between intellectual capital and market value with the sample of Taiwan listed companies. Study result by Chen et al., (2005) also showed that intellectual capital are highly affected the company's performance in future global market competition. Study by Bontis et al., (2000) explained that three components of VAIC do affect the financial performance where human capital and customer capital create an efficiency in performing business and structural capital have a direct relationship with business performance. Instead of many studies indicates that intellectual capital has strong relationship in financial performance and market value, Firer and Williams (2003) failed to find any evidence related to market value. Firer and Williams (2003) used VAIC valuation model to measure the effect of intellectual capital on return on assets (ROA), assets to turnover (ATO), and market valuation of 75 publicly traded companies in Southern African.

There are several factors used in determining the value of intellectual capital towards return on asset (ROA). The elements of determining the value of intellectual capital are human capital, relational capital, structural capital, social capital, spiritual capital, and technological capital. However, there are only three elements that are commonly used by the researchers which are human capital, relational capital, and structural capital. The other three elements of intellectual capital are hardly found in the previous researches which are concluded that social capital, spiritual

capital, and technological capital are the determinations to the value of intellectual capital.

Return on asset (ROA) is commonly used by researchers in measuring the productivity of the companies. As for the purpose of this study, the writer decides to use return on asset (ROA) as an indicator tool to identify the financial performance of pharmaceutical companies. Moreover, return on asset (ROA) can be easily found in previous researches as an indicator tool for productivity. By assessing two pharmaceutical companies to observe the phenomena of study, the table below shows how the value of return on asset (ROA) decrease/increase during the year of 2013 – 2017.

Table 1.4 The Value of Return on Asset (ROA) of Two Pharmaceutical Companies During The Year of 2013-2017

Code		2013	2014	2015	2016	2017
KLBF	**ROA**	17.4%	17.1%	15%	15.4%	14.7%
SIDO	**ROA**	13.7%	14.7%	15.6%	16%	16.9%

Source: Prepared by Writer (2019)

Based on table 1.4 above, it shows that Return on Asset of PT. Kalbe Farma, Tbk declined each year during the period, while Return on Asset of PT. Industri Jamu dan Farmasi Sido Muncul, Tbk increased each year during the period. This declining/inclining is resulted from various factors which cannot be explained specifically. However, the declining of return on asset (ROA) in this case might be the influenced by the value of intellectual capital which consists of value added capital employed (VACA), value added human capital (VAHU), and structural capital value added (STVA).

This can be explained that the value of intellectual capital depends on the value added within year. Value added is the component used to measure the value of each variable in this research. Value added is derived

from total revenue minus operating expenses excluded employees' expenses and it can be explained that value of value added itself depends on net income. Higher net income will cause the value of value added to decrease as well and affected to each element of intellectual capital.

Therefore, the writer decides to have further examination of pharmaceutical companies in order to assess the effect of intellectual capital which might have direct effect on return on asset (ROA) by using three independent variables and one dependent variable.

Based on the above background of study, the writer decided to investigate the impact of intellectual capital on financial performance and come up with this title "The Impact of Intellectual Capital on Financial Performance on Pharmaceutical Companies Listed in Indonesia Stock Exchange"

1.2 PROBLEM LIMITATION

The focus of this research is to examine the relationship between intellectual capital and financial performance. The writer decides to have three independent variables that are value added capital employed (VACA), value added human capital (VAHU), and structural capital value added (STVA) and one dependent variable namely return on asset (ROA) in this research. The reason of considering those variables as independent variables and dependent variables is because the writer will be using Pulic's model for the variable measurement. Meanwhile, the sample of this research is taken from listed pharmaceutical companies in Indonesia Stock Exchange from 2013 – 2017. The sample itself will be picked using purposive sampling method. The purpose of taking pharmaceutical companies as research object is to identify the value added of pharmaceutical industry sectoring in consumer goods industry.

1.3 PROBLEM FORMULATION

1. Does VACA partially affect the Return on Asset (ROA) of listed pharmaceutical companies in Indonesia Stock Exchange from 2013 – 2017?
2. Does VAHU partially affect the Return on Asset (ROA) of listed pharmaceutical companies in Indonesia Stock Exchange from 2013 – 2017?
3. Does STVA partially affect the Return on Asset (ROA) of listed pharmaceutical companies in Indonesia Stock Exchange from 2013 – 2017?
4. Do VAHU, VACA, and STVA simultaneously affect the Return on Asset (ROA) of listed pharmaceutical companies in Indonesia Stock Exchange from 2013 – 2017?

1.4 OBJECTIVE OF THE RESEARCH

1. To analyze the effect of VACA partially in measuring the return on asset (ROA) of listed pharmaceutical companies in Indonesia Stock Exchange from 2013 -2017.
2. To analyze the effect of VAHU partially in measuring the return on asset (ROA) of listed pharmaceutical companies in Indonesia Stock Exchange from 2013 – 2017.
3. To analyze the effect of STVA partially in measuring the return on asset (ROA) of listed pharmaceutical companies in Indonesia Stock Exchange from 2013 -2017.
4. To analyze the effect of VAHU, VACA, and STVA simultaneously in measuring the return on asset (ROA) of listed pharmaceutical companies in Indonesia Stock Exchange from 2013 – 2017.

1.5 BENEFIT OF THE RESEARCH

1.5.1. THEORETICAL BENEFIT

The theoretical benefit of this research is:

a) To provide as informative data of the relationship of intellectual capital and financial performance for further research.
b) To provide a better analytical assessment of intellectual capital as a variable in increasing value of the firm.

1.5.2. PRACTICAL BENEFIT

The practical benefit of this research is:

a) To provide a better understanding of intellectual capital as a value added for stakeholders such as employees, investors, suppliers, and customers in assessing firm's value towards the competitiveness in global market.
b) To expand external parties such as customers', investors', financial experts' knowledge of intellectual capital as an indicator of investment and also to assess the competencies of firm as a value creation towards the global market.

1.6 SYSTEMS OF WRITING

a) CHAPTER I

This chapter explains the background of study, problem limitation, problem formulation, objective of the research, benefit of the research, and systems of writing.

b) CHAPTER II

This chapter provides the theoretical background, previous research, hypothesis development, research model, and framework of thinking.

c) CHAPTER III

This chapter gives explanation about research design, population and sample, data collection method, operational variable definition and variable measurement, and data analysis method.

d) CHAPTER IV

This chapter focuses on general view of research object, data analysis, descriptive statistics, result of data quality testing, result of hypothesis testing, and discussion.

e) CHAPTER V

This chapter is to conclude the result of this research and divides into three sub-chapters which are conclusion, implication, and recommendation.