

The effect of intellectual capital on financial performance and market value of manufacturing companies listed in the Indonesia Stock Exchange 2010 - 2012

Lusia Amaluddin Andriani¹, Erida Herlina²

^{1, 2} STIE Perbanas Surabaya, Nginden Semolo Street 34-36, Surabaya, 60118, East Java, Indonesia

ARTICLE INFO

Article history:

Received 15 September 2014

Revised 20 December 2015

Accepted 12 January 2015

JEL Classification:

M40

Key words:

Intellectual Capital,
Financial Performances,
Market Value,
PLS.

DOI:

10.14414/tiar.15.050105

ABSTRACT

The purpose of this study is to examine the effect of intellectual capital on financial performance and market value of the manufacturing companies. The sample consists of manufacturing companies, which are consistently registered, in the Indonesia Stock Exchange during the period of 2010-2012. Intellectual capital was calculated using value added intellectual coefficient (VAICTM). The main components of VAICTM are physical capital (VACA), human capital (VAHU) and structural capital (STVA). Financial performance is measured using Return on Asset (ROA), Return on Equity (ROE) and Earning per Shares (EPS). Market value is measured using Price Book to Value (PBV) and Price Earnings Ratio (PER). The sampling in this study is using purposive sampling method. Based on the purposive sampling method, it was obtained 71 manufacturing companies listed in the Indonesia Stock Exchange during the period of 2010-2012. The data analysis was done by using Partial Least Square (PLS). The results show that: (1) intellectual capital has an effect on the financial performance, (2) intellectual capital has no effect on the market value, (3) financial performance is able to mediate the relationship between intellectual capital and market value.

ABSTRAK

Penelitian ini bertujuan untuk menguji pengaruh modal intelektual terhadap kinerja keuangan dan nilai pasar dari perusahaan manufaktur. Sampel terdiri dari perusahaan manufaktur yang konsisten terdaftar di Bursa Efek Indonesia selama periode 2010-2012. Modal intelektual dihitung dengan menggunakan value added intellectual coefficient (VAICTM). Komponen utama VAICTM adalah physical capital (VACA), human capital (VAHU) dan structural capital (STVA). Kinerja keuangan diukur dengan menggunakan Return on Asset (ROA), Return on Equity (ROE) and Earning per Shares (EPS). Market value diukur dengan Price Book to Value (PBV) and Price Earnings Ratio (PER). Pengambilan sampel dalam penelitian ini menggunakan metode purposive sampling. Berdasarkan metode purposive sampling, diperoleh 71 perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia selama periode 2010-2012. Analisis data dilakukan menggunakan Partial Least Square (PLS). Hasil penelitian menunjukkan bahwa: (1) modal intelektual memiliki efek pada kinerja keuangan, (2) modal intelektual tidak berpengaruh terhadap nilai pasar, (3) kinerja keuangan mampu memediasi hubungan antara modal intelektual dan nilai pasar.

1. INTRODUCTION

Rapid and intense global competition has recently taken place in all industrial sectors, not only in Indonesia but also all over the world. One of the industrial sectors is the sector of economy. The economy in Indonesia and in the world has been grow-

ing rapidly. It is marked by the advances in information technology, ownership of assets and the growth and development of innovations, which are continuously undertaken by companies.

Competition in business world involves both the investment of tangible and intangible assets

* Corresponding author, email address: ² erida@perbanas.ac.id.

ownership of the company. As described in the Statement of Financial Accounting Standard (PSAK) 19 (revised 2009) that intangible assets are non-monetary assets that can be identified without physical form. In this case, the definition of intangible assets is how a company is able to develop the company's resources, such as performing employee training, applying advanced technology, building good relationships with customers and managing new innovations that will eventually generate a useful added value for the company and the investors, and can also improve the financial performance of the company.

One of the efforts made by the company in achieving good performance and market value is by improving the quality of human resources, developing reliable technology, and building good relationship with customers that become the element of Intellectual Capital (IC) (Novia Wijaya 2012). IC is defined as knowledge resources such as employee, customer, and technology, for which the company can use them in the process of value creation for the company (Bukh et al. 2005 in Ihyaul 2009: 23). Bontis et al. (2000) in Ihyaul (2008) stated that in general, some researchers identify three main constructs of the IC, namely: human capital (HC), structural capital (SC), and customer capital (CC).

According to the Organization for Economic Cooperation and Development (OECD) (2008) in Eko and Arifin (2013), several companies today are investing in employee training, research and development (R&D), consumer relations, computerized systems and administration, and others. The improvement of the human resources quality in the company can also be done by empowering, training and motivating the employees.

The awareness of the importance of the company's intellectual capital management is reinforced by the more frequent emergence of the term of knowledge-based company in business discourse. Quoted from online media wordpress.com, knowledge-based company is a company that is filled by a community that has the knowledge, expertise, and skills. This community has the ability to learn, the power of innovation, and high problem solving ability. Another characteristic is that the company relies more on knowledge in sharpening its competitive edge. It is described by the increasingly shrinking investment allocation for physical goods, while for the soft factor gets greater investment allocation. The organization that can maintain its existence is an adaptive and innovative organization. The prerequisite for adaptive and

innovative is that the organization should have the capability of high learning and innovation.

Several studies have been done about the intellectual capital, and the results are varied. A research conducted by Hong Pew Tan, David Plowman and Phil Hancock (2007), examined the relationship between the company's intellectual capital (IC) and the financial performance with the samples of 150 companies listed in Singapore Stock Exchange in 2000-2002. The results show that (1) IC has positive relationship with the company performance, (2) IC correlates with the company's future performance, (3) the company's IC growth rate has positive relationship with the company performance, and (4) the contribution of the IC for the company's future performance is different from the industry.

The different results of the research are indicated by Benny Kuryanto and Muchamad Syafrudin. This research investigates the effect of intellectual capital on the company performance. The samples of the research are Indonesian companies listed in Indonesia Stock Exchange in 2003-2005. The results show that (1) there is no positive effect of the IC of a company on its performance, (2) the IC value of a company was getting higher, but the company's future performance was not getting higher, (3) there was no positive effect between the company's IC growth rate and the company's future performance, (4) the contribution of the IC for the company's future performance was different according to the type of industry.

Novelina Yunita (2012), in her research examines the effect of intellectual capital on the Financial Performance and Market Value of the Company. The sample consisted of manufacturing companies consistently listed in 2009-2010. The result of this study indicates that the intellectual capital affects the financial performance and market value of the company.

The different results of previous studies encourage the researcher to reexamine the effect of intellectual capital on financial performance and market value.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS

Stakeholder Theory

Stakeholder theory is to consider the position of stakeholders that is considered powerful. This stakeholder group is becoming the primary consideration for the company to disclose and/or not to disclose information in the financial statements (Ihyaul 2008). The management of organization is

expected to undertake activities that are considered important for their stakeholders and report back these activities on stakeholders (Ihyaul 2009: 4). This is done so that the stakeholders know the activities and performance of the company, thus the stakeholders can provide input to the company in carrying out the activities and functions of the management to optimize resources and revenues existing in the company so that the company can keep growing, compete in the global market, and know the dividends earned by the stakeholders from their investment.

The main purpose of the stakeholders is to help corporate managers understand their stakeholder environment and to manage the relationships existing in their corporate environment more effectively (Ihyaul 2009: 5). According to the stakeholder theory, when associated with this research, management is responsible in terms of the use of assets, asset management, and the reporting of all activities of the company to stakeholders.

Resources Based Theory

This theory assumes that the company will achieve a competitive advantage if the company has superior resources, ie the resources which are scarce and difficult to imitate by competitors and no replacement (Barney, 1991) in Ivan and Mohamad (2013).

According to the Resource-Based Theory (RBT), when associated with this research, superior and scarce resources in the company are human resources that become an element of intellectual capital. The ability of human resources in the company is different from one another. And this will be useful for the company to manage its assets, to create new innovations for the company to grow and be competitive.

Financial Performance

Performance of the company aims to measure the level of profitability of a company. According to Ceicilia and Josepha (2011), the performance of the company is essential for the management to produce outcomes that have been achieved either by individual or by group of individuals within an organization associated with the authority and responsibility in achieving the objectives of legality, confirm with moral and ethic, and not against the law. Financial performance ratios used in this study are return on assets (ROA), return on equity (ROE), and earnings per share (EPS).

Market Value of the Company

Value of a company is a certain condition that has

been achieved by a company as a description of public confidence in the company after going through a process of activity for several years, from the establishment of the company to the present time (Dwi Sukirni 2012). According to Husnan (2000) in I Gede (2012), the value of the company is the price that the prospective buyers are willing to pay when the company is sold. If a company offers its shares to the public, the value of the company will be reflected in its share price. So, when stock price increases, the shareholder will surely becomes richer or more prosperous.

The higher the stock price, the higher the value of the company. The wealth of the shareholder and the company is presented by the market price of the shares which is a reflection of the investment decision, financing, and asset management (Dwi Sukirni 2012). The market value of the company is useful to provide information about the performance of company in the past and the prospect of the company in the future (Bambang, Murtanto and Ari 2012).

Chen et al. (2005) stated that investors will give a higher value to the companies that have higher intellectual resources than those that have low intellectual resources. The values given by the investors to the company will be reflected in the company's stock price.

The ratio of the market value of the company used in this study is the Price to Book Value (PBV) and Price Earnings Ratio (PER).

Intellectual Capital

Intellectual capital is an intangible asset that plays an important role in improving the competitiveness of the company and is used effectively to increase corporate profits (Selvi and Golrida 2013). Astuti (2005) in Novia Wijaya (2012) stated that intellectual capital can be interpreted as a stock or capital which is based on the knowledge possessed by the company.

Bontis et al. (2000) in Ihyaul (2008) stated that in general, some researchers identified three main constructs of the IC, namely:

Human Capital represents the individual knowledge stock of an organization that is represented by its employees. Human Capital is a combination of genetic inheritance, education, experience, and attitude about life and business.

Structural Capital includes all non-human storehouses of knowledge within the organization, including database, organizational charts, process manuals, strategies, routines and all the things that make the value of the company is greater than the

value of material its.

Once the company is able to use the existing human capital in the company well, as explained in the structural capital on how the system in the company can be a container for human capital, the existing systems in company ranging from top management to the bottom line can also be well applied to improve financial performance and produce value added for the company.

Customer Capital is the knowledge inherent in the marketing channels and customer relationship where an organization develops it through the course of business.

Customer capital explains how the company establishes a good relationship with its partners, such as stakeholders, government, customers, and all those involved in the company's business processes in order to generate and increase value added of the company.

Value Added Intellectual Coefficient (VAICTM)

Value added intellectual coefficient (VAICTM) method was developed by Pulic in 1997 and it was designed to provide information about the value creation efficiency of tangible and intangible assets of the company. VAICTM is an instrument for measuring the performance of intellectual capital of the company. This model is started from the company's ability to create value added (VA). VA is the most objective indicators to assess the success of the business and demonstrate the ability of the company in the value creation. VA is calculated as the difference between output and input (Ihyaul 2009).

The measurement of the performance is one of the important factors not only for investors but also for the company. The measurement of company performance is important for the company to enhance its capabilities and value continuously. Good performance shows that the company can maximize the welfare of its shareholders. A company can measure its intellectual capital by using the method of measurement of Value Added Intellectual Capital (VAIC), by looking at the intellectual abilities and value possessed by the company until the present time.

The output (OUT) represents the revenue and covers all products and services sold in the market, while the input (IN) covers the entire expenses used in obtaining revenue. The important factor in this model is that the labor expenses are not included in the IN. Due to its active role in the process of value creation, intellectual potential, which is represented by labor expenses, is not counted as a cost and not included in the compo-

nent of IN (Ihyaul 2009).

Pulic (2004) in Bambang, Murtanto and Ari (2012) suggested three main components of value-added or VAICTM, which is a proxy of intellectual capital, namely, physical capital (VACA - Value Added Capital Employed), human capital (VAHU - Value Added Human capital) and structural capital (STVA - structural Capital Value Added).

VACA is an indicator for the VA, which is created by one unit of physical capital. Pulic assumed that if one unit of Capital Employed (CE) produces returns greater than other companies do, it means that the company utilizes its CE better. Thus, a better utilization of CE is part of the Intellectual Capital (IC) of the company (Ihyaul 2008).

VAHU shows how much value added (VA) can be produced with funds spent on labor. The relationship between VA and HC indicates the ability of the HC to create value in the company (Ihyaul 2008). The relationship between value added and human capital indicates the ability of HC to create value in a company (Tan et al. 2007).

Value added structural capital (STVA) shows how much value added can be produced with funds released after being deducted by the funds spent on labor (Novia Wijaya 2012). Structural capital consists of the organizational structure, the system of the company management, and others that are able to create and increase the value added for the company.

Excellence of VAICTM method is because the data required is relatively easy to obtain from various sources and types of companies. The data needed to calculate these ratios are standard financial figures that are generally available in the company's financial statements (Tan et al. (2007) in Rizki 2012).

The Effect of Intellectual Capital on the Financial Performance of the Company

In resources based theory, it is stated that a company will achieve its excellence if it has and can utilize its superior resources. One of the resources is intellectual capital (IC) of the company. In addition, in Ihyaul (2008), it is stated that if the IC is a measurable resource to increase competitive advantages, the IC will contribute to the company's financial performance (Harrison and Sullivan 2000; Chen et al. 2005; Abdol Mohammadi 2005).

If the company can use and develop the performance and productivity of its employees, then the employees will have a value-added and be able to increase sales and revenue for the company. If the company's revenue increases, the profit gener-

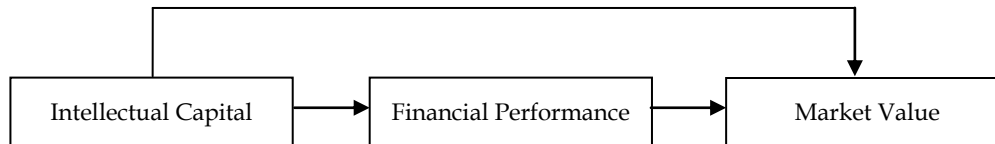


Figure 1
Research Framework

ated will also increase, it means that if the revenue and profit increase, the ROA and ROE of the company will also increase. If the ROA and ROE increases, it can be said that the company is able to manage the results of its operation, investment and financing decisions, thus it will be reflected in the Earnings per Shares (EPS).

Several studies examining the influence of intellectual capital on the company's financial performance have been done. One of them is by Tan, Plowman and Hancock (2007) and the study proves that the intellectual capital and company performance have positive relationship. In this study, the company's financial performance is measured by Return on Assets (ROA), Return on Equity (ROE) and Earnings per Shares (EPS).

Hypothesis 1: Intellectual Capital affects the financial performance of the company

The Effect of Intellectual Capital on the Market Value of the Company

Stakeholder theory states that a company is not an entity that operates only for its own sake, but should provide benefits to stakeholders. The better the company to maximize its potential, such as the management of tangible assets or intangible assets, the higher the value added that could be generated by the company. This value added will be able to push the company's financial performance for the benefit of the stakeholders (Ivan and Mohamad 2013).

If the market value is efficient, the investor will assess the company higher and will increase his investment to the company, which has greater investment or expenditure of intellectual capital (Belkaoui 2003) in Bambang, Murtanto and Ari (2012). Investors believe that intellectual capital is the main factor required by companies in the midst of intense competition, which will then provide increased market value and financial performance (Bambang, Murtanto and Ari 2012).

If the value of the company increases, it will also increase the company's share price in the stock market so that the PBV and PER will increase. It shows that the market becomes more confident in the company's prospect in the future.

Hypothesis 2: Intellectual Capital Affects the Market Value of the Company

The Effect of Intellectual Capital on the Market Value of the Company with Financial Performance as a Mediator

Market value is the number or amount of stock price that would be paid by investors. The stock price is also affected by the financial performance of the company. If the company's financial performance is good, it will increase the stock value of the company in the stock market.

If the company is able to use, manage and optimize its intellectual capital well, it will create value added and improve the financial performance of the company. In addition, later, the financial performance of the company may reflect the market value of company in the capital market. It can be concluded that the intellectual capital plays an important role in increasing the market value of the company through financial performance as the mediator.

One of the researches concerning the effect of intellectual capital on the market value with financial performance as an intervening variable, has been conducted by Ni Made Sunarsih and Ni Putu yuria Mendra (2012) and the results of the research show that (1) intellectual capital has positive effect on financial performance, (2) intellectual capital does not affect the market value, and (3) the financial performance as a mediator can mediate the relationship between intellectual capital and market value.

Hypothesis 3: Intellectual capital affects the market value of the company with financial performance as a mediator.

The framework underlying this study can be described in Figure 1.

3. RESEARCH METHOD

Sample Classification

The population in this study is manufacturing companies listed in Indonesia Stock Exchange in the period of 2010 - 2012. The samples in this study are manufacturing company.

The sampling of the companies in this study is using purposive sampling method. The criteria for the sample of manufacturing companies in this study are as follows: (1) the manufacturing companies listed on the Indonesia Stock Exchange and

remain listing during the study period of 2010-2012, (2) the manufacturing companies that have annual report ended on December 31, and use Indonesia Rupiah (IDR) as the reporting currency, (3) the manufacturing companies that provide audited and published annual financial statements, (4) the manufacturing companies that do not suffer loss and the balance sheet does not show negative figure during 2010-2012, (5) the manufacturing companies that have information required in this study.

Of the 107 companies listed on the Indonesia Stock Exchange during the period of 2010-2012, 71 companies are selected as the sample according to the sample selection criteria.

Research Data

This study is using secondary data obtained from the financial statements of manufacturing companies listed in Indonesia Stock Exchange (IDX) through the website www.idx.co.id and Indonesian Capital Market Directory (ICMD) in 2010-2012. Data are collected using the method of documentation.

Research Variables

The dependent variables of this study are financial performance and market value of the company. The financial performance variable is measured by Return on Assets (ROA), Return on Equity (ROE) and Earning per Share (EPS), while the market value variable is measured by the Price to Book Value (PBV) and Price Earnings Ratio (PER). The independent variable of this study is intellectual capital (IC).

Operational Definition of Financial Performance

Return on Assets (ROA)

Return on Assets (ROA) measures the company's ability to utilize its assets to make a profit (Dwi 2011: 91). ROA is calculated using the formula:

$$ROA = \frac{\text{Net Profit}}{\text{Total Asset}} \quad (1)$$

Return on Equity (ROE)

Return on Equity (ROE) measures how much profit a company can produce every Indonesia Rupiah of the shareholder capital (Benny and Muchamad 2009). The formula to obtain ROE is:

$$ROE = \frac{\text{Net Profit}}{\text{Total Equity}} \quad (2)$$

Earning per Shares (EPS)

Earning per Share (EPS) is the amount that be-

comes the rights to every holder of a common stock (Dwi 2011: 99). The formula to obtain the EPS is:

$$EPS = \frac{\text{Profit to Shareholders}}{\text{Weighted Average number of Shares}} \quad (3)$$

Operational Definition of Market Value

Price to Book Value (PBV)

PBV ratio is the ratio between the stock price and the book value of equity (Anggarwal et al. 1992 and Wirawati 2008) in I Gede (2012).

$$PBV = \frac{\text{Closing Stock Price}}{\text{Book Value per Share}} \quad (4)$$

Price Earnings Ratio (PER)

Price Earnings Ratio (PER) is the ratio used to see the comparison of price per share to earnings per share (Novelina 2012).

$$PER = \frac{\text{Stock Price}}{\text{Earnings per Share}} \quad (5)$$

Operational Definition of Value Added Intellectual Coefficient (VAIC™)

Calculating the Value Added

$$VA = \text{OUTPUT} - \text{INPUT} \quad (6)$$

Description :

Output (OUT) : Total revenue+ other income.

Input (IN) : Expenses + other expenses.

Value Added (VA) : The difference between Output and Input.

Calculating Value Added Capital Employed (VACA)

$$VACA = VA/CE \quad (7)$$

Description :

VACA : Value Added Capital Employed

VA : Value Added

CE : Available Funds (Equity)

Calculating Value Added Human Capital (VAHU)

$$VAHU = VA/HC \quad (8)$$

Description :

VAHU : Value Added Human Capital

VA : Value Added

HC : Total Expenditures Incurred for Employee.

Calculating Structural Capital Value Added (STVA)

$$STVA = SC/VA \quad (9)$$

Description :

STVA : Structural Capital Value Added

SC : Structural capital : VA - HC

VA : Value Added

Table 1
Descriptive Analysis Variable

| Variables | N | Minimum | Maximum | Mean | Std. Dev. |
|-----------|-----|---------|------------|----------|-----------|
| ROA | 213 | 0.0009 | 0.4163 | 0.1065 | 0.0850 |
| ROE | 213 | 0.0029 | 1.2195 | 0.1866 | 0.1631 |
| EPS | 213 | 1.2700 | 13439.0000 | 818.9105 | 2102.8471 |
| PBV | 213 | 0.2200 | 40.0900 | 2.8900 | 4.8100 |
| PER | 213 | 0.5900 | 1191.5900 | 28.7200 | 112.5700 |
| VACA | 213 | 0.0700 | 4.3000 | 0.6500 | 0.5600 |
| VAHU | 213 | 0.8900 | 31.6300 | 6.2200 | 4.6700 |
| STVA | 213 | -0.1200 | 0.9700 | 0.7400 | 0.1900 |
| VAIC | 213 | 0.9000 | 33.3200 | 7.6100 | 4.9300 |

Source: Processed Data.

Calculating Value Added Intellectual Capital (VAICTM)

$$VAIC^{TM} = VACA + VAHU + STVA. \quad (10)$$

Analysis Instruments

Descriptive Statistic

Descriptive analysis is the most fundamental analysis to describe the state of the data in general. In the descriptive analysis will present a minimum value, maximum value, mean value, and standard deviation, both for the dependent and for independent variables.

Partial Least Square (PLS) Analysis

The testing of the research hypothesis is done using Structural Equation Model (SEM) approach with Partial Least Square (PLS) software.

Outer Model Testing

Measurement model, commonly called outer model, shows how manifest variable or observed variable presents latent variables to be measured (Hengky and Imam 2012: 8). The evaluation of the measurement model or outer model is performed to assess the validity and reliability of the model.

The testing of validity consists of two stages; convergent validity testing and construct validity testing. Reliability test is measured using a composite reliability to estimate the internal consistency of a construct.

Inner Model Testing

Structural model, commonly called inner model, shows the strength of estimation between latent variables or constructs (Hengky and Imam 2012: 8). In assessing the structural model with PLS, it is started by looking at R-Squares for each endogenous latent variable as the predictive power of the structural model. Changes in the value of R-Squares can be used to explain the effect of certain

exogenous latent variables on the endogenous latent variables, whether they have a substantive effect (Hengky and Imam 2012: 82).

4. DATA ANALYSIS AND DISCUSSION

Descriptive Testing

In the descriptive analysis will present a minimum value, maximum value, mean value and standard deviation, for both dependent and independent variables. Table 1 is the explanation and descriptive analysis.

Table 1 explains that the mean value of ROA is 0.1065. The standard deviation of ROA is 0.0850, which is smaller than the mean value. It means that the distribution of the data of ROA is good.

The mean value of ROE is 0.1866. The standard deviation of ROE is 0.1631, which is smaller than the mean value. It means that the distribution of the data of ROE is good.

The mean value of EPS is 818.9105. The standard deviation of EPS is 2102.8471, which is bigger than the mean value. It means that the distribution of the data of EPS is not good. The highest value of EPS is 13439.0000 while its lowest value is 1.2700.

The instrument used to measure the independent variable, intellectual capital, is VAICTM. The mean value of VAIC of the 71 manufacturing companies studied during 2010-2012 is 7.61. The standard deviation of intellectual capital is 4.93.

The mean value of VACA (Value Added Capital Employed) is 0.65, indicating that the company is able to maximize its physical capital in assisting the creation of the company's value-added of 0.65.

The mean value of VAHU (Value Added Human Capital) is 6.22, indicating that the company is able to create its value added of 6.22 of the salaries paid to employees

The mean value of STVA (*Structural Capital Value Added*) is 0.74.

Table 2
Results of Path Coefficient Analysis

| | Path Coefficients (O) | Sample Mean (M) | Std. Deviation (STDEV) | Std. Error (STERR) | T Statistics (O/STERR) |
|---|--------------------------|--------------------|---------------------------|-----------------------|-----------------------------|
| VAIC -> Company Performance | 0.627272 | 0.619326 | 0.065273 | 0.065273 | 9.610047 |
| VAIC -> Company Value | 0.165153 | 0.180945 | 0.094297 | 0.094297 | 1.751425 |
| Company Performance -> Company Value | 0.610085 | 0.585681 | 0.085622 | 0.085622 | 7.125304 |

Source: Processed Data of PLS (2014).

Discussion

The hypothesis testing is obtained by looking at the value of t-statistics of the first hypothesis of 9.610047 (Table 2). This value is greater than the value of $Z \alpha = 0.05$ (5%) = 1.96. It can be said that VAICTM affects the company's financial performance.

Value Added Intellectual Coefficient (VAICTM) affects the financial performance of company with a path coefficient of 0.627272. The value on the path coefficient is positive, indicating that the intellectual capital has positive effect on the company's financial performance.

The second hypothesis testing is the intellectual capital affects the market value of the company, acquired the value of t-statistics = 1.751425. This value is smaller than the value of $Z \alpha = 0.05$ (5%) = 1.96. it can be said that VAICTM does not affect the market value of the company. With this result, the second research hypothesis is rejected.

The third hypothesis testing obtained the value of t-statistics = 7.125304. This value is greater than the value of $Z \alpha = 0.05$ (5%) = 1.96. It can be said that VAICTM affects the market value of the company with the financial performance as a mediator.

Value Added Intellectual Coefficient (VAICTM) must go through the company's financial performance to increase the company's market value. In other words, the company must improve the intellectual capital in the company's financial performance to increase the company's market value.

The value of path coefficients of 0.610085 is positive, which means that the higher the financial performance of the company, the higher the effect of the intellectual capital on the company's market value. With this result, the third research hypothesis can be accepted.

The effect of Intellectual Capital on the Financial Performance

The result of the first hypothesis shows that the intellectual capital affects the financial performance with the value of the t-statistics of 9.610047 and the path coefficient of 0.627272.

In addition, current global business competi-

tion requires the businessmen to be more innovative in managing their business so that the company can continue to compete and survive in the global business. The innovations realized by the company are not only focused on the development of creative ideas in the company but also the management of intellectual resources.

The Intellectual resources include physical capital, human capital and company structure. If the asset utilization, employee training and organizational structures existing in the company can be managed properly, the employees will be able to create innovative ideas in terms of the improvement of the company performance, particularly in generating profits. The ideas in terms of meeting the needs of consumers, among others, are the manufacture of more various goods and services that can satisfy the customers.

The value of sales will increase, if the customers' needs are met and their loyalty to the company is higher. Increased sales will also affect the increase in profits and the performance of the company so the return on assets (ROA), return on equity (ROE) and earnings per share (EPS) will also increase.

The result of this research is consistent with the research conducted by Novelina (2012) and Ni Made and Ni Putu (2012) stating that the intellectual capital affects the financial performance. If the company can manage its intellectual resources (physical capital, human capital and structural capital) it will provide improved outputs which are shown from the increase in the company's financial performance. However, the result of this research does not correspond with the research conducted by Kuryanto (2008) stating that intellectual capital does not have positive effect on the company performance.

The effect of Intellectual Capital on the Market Value of the Company

The result of the second hypothesis shows that intellectual capital does not affect the value of the company because the value of the t-statistics of 1.751425 is smaller than 1.96. This means that the

market does not give high value to the company that has a high intellectual capital, and the investors do not assess that the market value of a company is efficient from the company's investment on the intellectual capital. The investors tend not to look at the intellectual resources of the company, but to see it from the physical resources of the company.

The result of this research is consistent with the research conducted by Ni Made and Ni Putu (2012) stating that intellectual capital has no effect on the value of the company and the result of this research is not consistent with the research conducted by I Gede (2012) stating that the intellectual capital has positive effect on the value of the company.

The Effect of Intellectual Capital on the Market Value of the Company with Financial Performance as a Mediator

The result of the research shows that the intellectual capital affects the market value of the company with financial performance as a mediator with the value of t-statistics = 7.125304. This suggests that financial performance becomes the consideration for investors to assess the company, whether the investors would get benefit if they invest in the company. The financial performance of the company also reflects whether the company has good prospects in the future or even suffers losses and bankruptcy.

In this study, the market value of the company is reflected in its stock price. If the financial performance increases, the influence of the intellectual capital on the market value of the company, as reflected in the price earnings ratio (PER) and price to book value (PBV), will also increase.

The result is consistent with the research conducted by Ni Made and Ni Putu (2012) stating that the financial performance is able to mediate the relationship between intellectual capital and the value of the company.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

This study has several limitations, both in sampling and method used. These limitations include: (1) the study sample is limited because there were several manufacturing companies that are not listed in Indonesia Stock Exchange during the study period 2010-2012 and do not publish the complete financial statements, (2) the total expenditures for employees put in the formula of value added human capital (VAHU) do not reflect the total expenditures for the employees of the company as it is

meant in the sense of intellectual capital. Human Capital represents the individual knowledge stock of an organization, such as training and human resources development provided by the company. Such Information is not included in the financial statements of the companies listed on the Indonesia Stock Exchange.

Based on the results and limitations of the study, the suggestions that can be put forward are as follows: (1) the companies are advised to pay more attention to the completeness of the data in the financial statements that relate to the total employee expenses, (2) the application of intellectual capital in this study is seen based on the numbers in the financial statements. For further research, it is expected to examine the intellectual capital from other sides, such as the disclosure of the company, (3) the company is expected to provide clear information about the concept of intellectual capital in its accounting treatment in the financial statements, (4) further research is recommended to consider the use of other instruments in the measurement of intellectual capital in addition to the method of VAICTM, (5) further research is recommended to use another proxy to measure the financial performance of the company and the company's market value, (6) further research is expected to add an intervening variable other than the company's financial performance so that the research on intellectual capital is growing.

REFERENCES

- Bambang, S, Murtanto, Ari, P 2012, *Effect Intellectual Capital (Value Added Intellectual Capital) to Market Value and Financial Performance of Banking Sector Companies Listed in Indonesia Stock Exchange*, The 2012 International Conference on Business and Management, accessed in November 2013.
- Benny, K & Muchamad, S 2014, Pengaruh Modal Intelektual Terhadap Kinerja perusahaan, <scholar.google.com>, accessed in May 2014.
- Ceicilia B & Josepha C 2011, 'Intellectual Capital dan Ukuran Fundamental Kinerja Keuangan Perusahaan', *Jurnal Akuntansi Dan Keuangan*, Vol. 13, No. 2, November 2011: 57-66.
- Chen, M, Cheng, S, Hwang, Y 2005, 'An Empirical Investigation Of The Relationship Between Intellectual Capital And Firms' Market Value And Financial Performance', *Journal of Intellectual Capital*, Vol. 6 No. 2, 2005, pp. 159-176.
- Dwi Prastowo, 2011, *Analisis Laporan Keuangan : Konsep Dan Aplikasi*, Yogyakarta : Unit Penerbit dan Percetakan Sekolah Tinggi Ilmu Manaje-

- men YKPN.
- Dwi, Sukirni 2012, 'Kepemilikan Manajerial, Kepemilikan Institusional, Kebijakan Deviden Dan Kebijakan Hutang Analisis Terhadap Nilai Perusahaan', *Acoounting Analysis Journal*, ISSN 2252-6765, (accessed on May 12, 2014).
- Eko W & Arifin S 2013, 'Analisis value added sebagai indikator intellectual capital dan konsekuensinya terhadap kinerja perbankan', *Diponegoro Journal of Accounting*, Vol. 2, No. 1, pp. 1-14.
- Hengky, L, Imam Ghozali, 2012, *Partial Least Square Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS 2.0 M3*, Semarang: Badan Penerbit Universitas Diponegoro.
- I Gede, CP 2012, 'Pengaruh Modal Intelektual pada Nilai Perusahaan Perbankan Yang Go Public di Bursa Efek Indonesia', *Jurnal Ilmiah Akuntansi dan Humanika JINAH*, Vol. 2 No. 1.
- Ikatan Akuntan Indonesia, 2012, *Pernyataan Standar Akuntansi Keuangan (PSAK) No. 19 Aset Tidak Berwujud*.
- Ihyaual, Ulum, 2009, *Intellectual Capital 'Konsep dan Kajian Empiris'*, Yogyakarta : Graha Ilmu.
- Ihyaual, Ulum, Imam Gozhali, and Anis Chariri, 2008, 'Intellectual Capital dan Kinerja Keuangan Perusahaan; Suatu Analisis dengan Pendekatan Partial Least Squares', *SNA XI Pontianak*, (Accessed in September 2013).
- Ivan, H and Mohamad, N 2013, 'Pengaruh Intellectual Capital pada financial performance perusahaan (Studi Empiris pada perusahaan infrastruktur, utilitas, dan transportasi yang terdaftar di Bursa Efek Indonesia tahun 2009-2011', ISSN (online): 2337-3806 Vol. 2, No. 3.
- Ni Made, S & Ni Putu, YM 2012, 'Pengaruh Modal Intelektual Terhadap Nilai Perusahaan Dengan Kinerja Keuangan Sebagai Variabel Intervening Pada Perusahaan Yang Terdaftar Di Bursa Efek Indonesia (Online), scholar.google.com, Accessed on May 9, 2014.
- Novelina, Y 2012, 'Pengaruh Modal Intelektual terhadap kinerja keuangan dan nilai pasar' *Acoounting Analysis Journal*, ISSN : 2252-6765, (Accessed in September 2013).
- Novia, W 2012, 'Pengaruh *Intellectual Capital* terhadap kinerja keuangan dan nilai pasar perusahaan perbankan dengan metode *Value Added Intellectual Coefficient*' *Jurnal Bisnis dan Akuntansi* Vol. 14, No. 3, pp. 157-180.
- PSAK No. 19 (Revisi 2009).
- Rizki, FR 2012, 'Pengaruh *Intellectual Capital* terhadap kinerja keuangan perusahaan perbankan yang terdaftar di BEI', *Jurnal Keuangan dan Bisnis*, Vol. 4, No. 3.
- Selvi, MS and Golrida, K 2013, 'Pengaruh Modal Intelektual terhadap kinerja keuangan', ISSN: 2303-4119 Vol. 1, No. 2.