

# The influence of intellectual capital on company value with financial performance as an intervening variable in financing institutions in Indonesia

Susi Nafiroh<sup>1</sup>, Joicenda Nahumury<sup>2</sup>

<sup>1, 2</sup> STIE Perbanas Surabaya, Nginden Semolo Street 34-36, Surabaya, 60118, East Java, Indonesia

## ARTICLE INFO

### Article history:

Received 29 April 2016

Revised 10 October 2016

Accepted 14 December 2016

### JEL Classification:

G32

### Key words:

Intellectual Capital,  
VAICTM,  
Company Value, and  
Financial Performance.

### DOI:

10.14414/tiar.v6i1.604

## ABSTRACT

The objective of this study is to examine the influence of intellectual capital on company value with financial performance as an intervening variable in financing institutions listed on the Indonesian Stock Exchange (IDX) 2010 - 2014. This research uses Value Added Intellectual Coefficient (VAICTM) model that consists of three components: Value Added Capital Employed (VACA), Value Added Human Capital (VAHU), and Value Added Structural Capital (STVA). Company value is measured using Tobin's Q, financial performance is measured using Return on Asset (ROA), Return on Equity (ROE), and Earning per Share (EPS). The data consisted of 67 samples. Sampling is conducted using census method. Data analysis technique used in this study is Partial Least Square (PLS). The results show that: (1) intellectual capital has an influence on company value (2) financial performance mediates the relationship between intellectual capital and company value. The important thing in this study is that intellectual capital can be used for adding the firm value.

## ABSTRAK

Penelitian ini bertujuan untuk menguji pengaruh modal intelektual terhadap nilai perusahaan dengan kinerja keuangan sebagai variabel intervening di lembaga pembiayaan yang terdaftar di Bursa Efek Indonesia (BEI) 2010 - 2014. Penelitian ini menggunakan Value Added Intellectual Coefficient (VAICTM) Model yang terdiri dari tiga komponen: Value Added Capital Employed (VACA), Value Added Human Capital (VAHU), dan Value Added Structural Capital (STVA). Nilai perusahaan diukur dengan menggunakan Tobin Q, kinerja keuangan diukur dengan menggunakan Return on Asset (ROA), Return on Equity (ROE), dan Earning Per Share (EPS). Data yang digunakan adalah 67 sampel. Sampling dilakukan dengan metode sensus. Teknik analisis data yang digunakan dalam penelitian ini adalah Partial Least Square (PLS). Hasil penelitian menunjukkan bahwa: (1) modal intelektual memiliki pengaruh pada nilai perusahaan (2) kinerja keuangan memediasi hubungan antara modal intelektual dan nilai perusahaan. pp.penting dalam studi ini adalah bahwa modal intelektual dapat digunakan untuk menambahkan nilai perusahaan.

## 1. INTRODUCTION

The economy development has a significant effect of changes on business management and determination on competitive strategy. Business people begin to realize that the ability to compete not only lies in the ownership of tangible assets, but also in innovation, information systems, organization management, and human resources owned (Agnes 2008). Indonesian political condition, after the presidential

election in 2014, has affected the capital market in Indonesia. The shares outstanding in the stock market have been fluctuating during the recent political condition. The market concerns over the effectiveness and continuity of the new government program led to the collapse of the Indonesian rupiah (IDR), which touched the level of IDR 12,000 per USD and the drop in the Composite Stock Price Index (CSPI) below the level of IDR 5,000, recorded as the worst

\* Corresponding author, email address: <sup>1</sup> snafiroh@yahoo.co.id.

in Asia. Until October 8, 2014, stock index fell 4.6%, greater than the average decline in share prices in Asia, which was only 3%. The decline in share prices illustrates that the company's performance is not good, which can be seen from the decline in market value ([merdeka.com](http://merdeka.com)). This shows that companies in Indonesia still have unstable financial performance and market value.

The decline in the performance and market value is caused by less maximum management of the company's resources. One resource that could potentially improve the performance and the current market value is Intellectual Capital (Yunita 2012). Intellectual Capital is a group of knowledge assets as an organizational attribute to improve the competitive position significantly by adding value to stakeholders (Marr and Schiuma 2001 in Solikhah et al. 2010). The company that could maximize the use of its resources will be able to create an added value and competitive advantage. This, in turn, has an effect on the improvement of the company's financial performance. Company's good financial performance will have an effect on the company's market value. Investors will place a higher value for the company that has greater intellectual capital. The greater the intellectual capital, the higher the company's share value, and this will be demanded by investors so that the share prices tend to rise (Iswajuni 2014).

As time goes by, companies in Indonesia are starting to realize the importance of intellectual capital. This is evident from the growing number of companies that implement knowledge-based strategy. The existence of Indonesian Most Admired Knowledge Enterprise (Make) Study proves that Indonesian "Make" Study aims to give reward and recognition to companies that implement knowledge-based strategies. The management of intellectual capital is very important. The presence of AEC 2015 requires companies to have competent and knowledge-based human resources (HR) that master more than one skill.

This study attempts to examine the influence of intellectual capital on company value with financial performance as an intervening variable in the financing institutions listed on the Indonesia Stock Exchange (IDX) 2010-2014. Financing institutions have a very important role and function in supporting the national economy, that is, as one of the alternative sources of financing for the community in terms of fulfilling the needs of capital and or purchasing assets ([www.bess.co.id](http://www.bess.co.id)). The three components of intellectual capital, such as human capital, structural capital, and customer capital, are needed

in financing institutions so that the companies have human resources that have skills, expertise, job performance, and ability to establish good relationships with consumers to attract and reassure consumers to use and buy the services they offer.

Research on intellectual capital has been carried out by several researchers. In Iran, Pouraghajan et al. (2013) studied intellectual capital with the aim to determine the effect of intellectual capital on market value and financial performance of the companies listed on Tehran Stock Exchange during 2006-2010. The result shows that intellectual capital has positive significant effect on market value and financial performance.

Iswajuni (2014) conducted a study aimed to examine the effect of intellectual capital on profitability, market value, growth, and actual return. The result reveals that intellectual capital has significant effect on profitability, market value, actual return, but it has no effect on growth. Previously, Ulum et al. (2008) also examined the effect of intellectual capital on company's financial performance using samples of 130 banking sector companies for three years of observations from 2004 to 2006. The result shows that intellectual capital has an effect on company's financial performance during a three-year observation and future financial performance.

The different result is obtained from the research conducted by Tri Ciptaningsih (2013) examining the effect of intellectual capital on company's financial performance. The test result using multiple regression analysis shows that intellectual capital has no effect on company's financial performance. The same thing also occurs in the research conducted by Martha and Saarse (2013), examining the effect of intellectual capital on the profitability of the banks listed on the Indonesia Stock Exchange with a total sample of 22 companies. The result of multiple linear regression analysis proves that VAHU has no effect on profitability, whereas STVA and VACA have significant positive effect on profitability.

## 2. THEORETICAL FRAMEWORK AND HYPOTHESIS

### Stakeholder Theory

According to Freeman and Reed (1983) in Ulum (2009), stakeholder is a group of people or individuals who are identified capable of affecting the company's activities and being affected by the company's activities. Company is not just responsible for the owner (shareholder) as occurring at present, but has shifted more broadly in the areas of social (stakeholder).

Stakeholder theory, in the context of explaining the relationship between intellectual capital (VAIC™) and company value, is viewed from two fields: in ethics (moral) and in managerial. In the field of ethics, it is argued that all stakeholders have the right to be treated fairly by the organization, and managers should manage the organization for the benefit of all stakeholders (Deegan 2004 in I Gede 2012). In the field of managerial, it is stated that the stakeholder's power to influence corporate management should be seen as a function of the level of stakeholder control over the resources needed by the organization (Watts and Zimmerman 1986 in I Gede 2012).

### **Resource-Based Theory**

Resources-Based Theory, pioneered by Penrose (1959) in Astuti (2005), argues that the company's resources are heterogeneous, not homogeneous. The productive services provided are derived from the company's resources that provide a unique character for each company. Meanwhile, according to Solikhah et al. (2010), Resource-Based Theory (RBT) is an idea that develops in the theory of strategic management and company's competitive advantage that believes that the company will achieve its excellence if it has superior resources.

The company's competitive advantage can be obtained if the company's resources are used to seize opportunities or able to cope with the threats in the company environment. If these resources are helpful in providing a competitive advantage, the company has unique resources that are not easily imitated and not owned by the company's competitors (Iswajuni 2014).

### **Financing Institution**

Financing institution is a business entity that conducts financing activities in the form of providing funds or capital goods (ojk.go.id). Financing institution consists of:

1. Financing Company, a business entity specifically set up to conduct leasing, factoring, consumer finance, and/or credit card business.
2. Venture Capital Company, a business entity that conducts business of financing / equity capital into a company that receives funding assistance (investee Company) for a certain period in the form of share, the investment through the purchase of convertible bonds, and or financing based on the sharing of the business results.
3. Infrastructure Financing Company, a business entity established specifically for financing in the form of providing funds to infrastructure

projects.

### **Intellectual Capital**

Marr and Schiuma (2001) in Solikhah et al. (2010) explains that intellectual capital (IC) is a group of knowledge assets as an organizational attribute to improve the competitive position significantly by adding value for stakeholders. Bontis et al. (2000) in Ulum et al. (2008) state that in general, the researchers identify three main constructs of intellectual capital (IC), namely:

#### **a. Human Capital (HC)**

Human capital is the individual knowledge stock of an organization which is presented by its employees. Human capital is a combination of genetic inheritance, education, experience, and attitude about life and business

#### **b. Structural Capital (SC)**

Structural capital is an entire non-human knowledge stock within the organization including database, organizational charts, process manuals, strategies, routines and all the things that make the company's value is greater than the value of the material

#### **c. Customer Capital (CC)**

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

### **Value Added Intellectual Coefficient (VAIC™)**

One method of monetary-based measurements that can be used to measure the efficiency of added value to intellectual capital is using VAIC™ (Value Added Intellectual Coefficient) developed by Pulic (1998) in Martha and Saarse (2013). VAIC™ is used because it is considered as a suitable indicator for measuring intellectual capital (IC). Value Added Intellectual Coefficient (VAIC™) is a method created by Pulic (1998) to help present and calculate information about the value creation of tangible assets and intangible assets of the company. VAIC™ consists of three (3) components:

1. Value Added of Capital Employed (VACA) is an indicator for Value Added (VA) created by one unit of physical capital. If one unit of capital employed (CA) produces greater returns than other companies, the company is better in utilizing the CA. Better utilization of CA is part of the company's IC (Pulic 1998 in Adrian and Saarse 2014).
2. Value Added Human Capital (VAHU) shows how much VA generated by the release of funds for labor. The relationship between VA and hu-

man capital (HC) indicates the ability of HC to create more value in the company (Pulic 1998 in Adrian and Saarse 2014).

### 3. Structural Capital Value Added (STVA)

According to Pulic (1998), STVA shows the contribution of structural capital (SC) in value creation. STVA measures the number of SC required to generate value added (VA) (Pulic 1998 in Adrian and Saarse 2014).

### Financial Performance

According to Sutrisno (2009: 53), company's financial performance is a feat achieved by the company in a given period which reflects the level of health of the company. Financial performance can be used as a basis for decision-making by investors, because it describes the financial performance of the company's financial condition, either in the past or the present.

### Company Value

Company value is the price paid by a prospective buyer if the company is sold (Husnan and Pudjiastuti 2012: 6). One indicator that can be used to measure the company value is Tobin's Q. Tobin's Q denotes a management's performance in managing the company's assets (Bambang and Elen 2010).

When a company issues its shares in the capital market, the price of the shares traded on the stock exchange is an indicator of the company value. The higher the share price, the higher the value of the company (Husnan and Pudjiastuti 2012: 6).

### The Effect of Intellectual Capital on Company Value

Based on stakeholder theory and resource-based theory, a company that has good performance of intellectual capital tends to reveal its intellectual capital better. In order to attract the attention of the market, the company should be able to improve the management of its intellectual capital. If investors put a high value to a company which has high intellectual capital, this will have an impact on an increase in Tobin's Q ratio, where the Tobin's Q ratio is used as a measure in assessing the company and an overview of the company value from the investors' perspective (Olivia and Saarse 2015).

Research on the effect of intellectual capital on company value has been done by I Gede (2012) which shows that intellectual capital has a positive effect on company value. Olivia and Saarse (2015) also conducted a study that shows that intellectual capital has an influence on the company value from Tobin's Q ratio.

Based on the explanation above, the hypothesis can be formulated as follows:

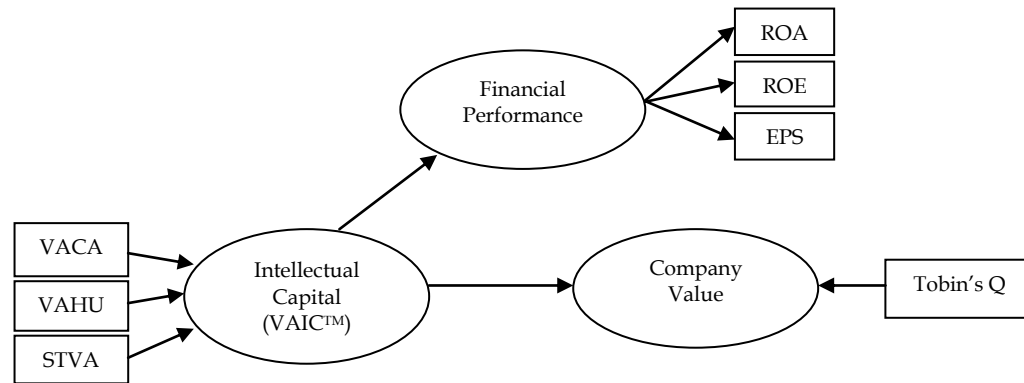
Hypothesis 1: Intellectual capital has an influence on company value.

### The Influence of Intellectual Capital on Company Value with Financial Performance as the Intervening Variable

One measurement of financial performance is Return on Assets (ROA) which measures how much profit that can be generated by a company on every IDR (Indonesian Rupiah) invested in assets. Based on the resource-based theory, efficient and economical use of company resources can minimize the costs that occur (Iswajuni 2014). The better the company in managing the three components of intellectual capital, the better the company in managing its assets. If the company is able to manage its assets well and can reduce operating costs, the company will be able to increase the added value from the results of the company's intellectual capabilities (Martha and Saarse 2013). The relationship between intellectual capital and company value and Return on Assets (ROA) has been examined by Ulum et al, (2008), Martha and Saarse (2013), Eskandar (2013) and Deep and Narwal (2014), stating that intellectual capital has an effect on ROA.

Return on Equity (ROE) is also a ratio that can be used to measure the company's financial performance. ROE measures how much profit that can be generated by a company on every IDR of shareholder capital. When all three components of intellectual capital (human capital, structural capital and customer capital) owned by the company can be harnessed and used as much as possible, this indicates that the management is able to manage the organization for the benefit of the shareholders (Iswajuni 2014). The relationship between intellectual capital and ROE has been investigated by Adrian and Saarse (2014), Pouraghajan et al. (2013) and Fathi et al. (2013), stating that intellectual capital has a significant effect on ROE.

Earnings per Share (EPS) demonstrates the company's ability to generate profits based on the shares held. EPS is one of the financial ratios that can be used by investors or potential investors to determine a company's financial performance. If the management of intellectual capital is good, it will have an impact on the company's financial performance so that the Earnings per Share (EPS) to be high. Based on the research conducted by Rana-ni and Bijani (2014) on the effect of intellectual capital on financial performance, shows that intellectual capital is proven to have an effect on EPS.



**Figure 1**  
**Framework**

If the company is able to maximize the use of all three components of intellectual capital (human capital, structural capital and customer capital), so that there is an increase in ROA, ROE and EPS, it will lead to improved financial performance. Good financial performance will also affect the market value of the company, where investors will place a higher value for the company that has great intellectual capital. The higher the intellectual capital, the higher the company value, and therefore the shares will be much in demand by investors and the share price tends to rise (Iswajuni 2014). Research on the effect of intellectual capital on company value and financial performance as an intervening variable has been investigated by Diva and Mitha (2014) which shows that the financial performance mediates the relationship between intellectual capital and company value.

Based on the explanation above, the hypothesis can be formulated is hypothesis 2 that financial performance mediates the relationship between intellectual capital and company value. The framework in this study is as Figure 1.

### 3. RESEARCH METHOD

#### Sample Classification

The subject of this study is financing institutions listed on the Indonesia Stock Exchange (IDX) 2010-2014. Based on census method, it is obtained as many as 67 samples used in this study.

#### Research Data

The research data were secondary data obtained from company's financial statements of the financing institutions listed on the Indonesia Stock Exchange. The method of data collection in this study is documentation, a data collection technique which is drawn from the financial statements of the financing institutions in 2010-2014 obtained from the Indonesia Stock Exchange (IDX) website [www.idx.co.id](http://www.idx.co.id). and Indonesian Capital Market Directory (ICMD).

#### Research Variables

The variables used in this study are:

1. Independent Variable: *Intellectual Capital*
2. Dependent Variable: *Company Value*
3. Intervening Variable: *Financial Performance*.

#### Operational Definition of Variables

##### Intellectual Capital

The independent variable used in this study is intellectual capital. Intellectual capital in this study is measured based on the value added created by physical capital (VACA), human capital (VAHU), and structural capital (STVA). These three components are symbolized by VAIC™ developed by Pulic (1998; 1999; 2000) in (Ulum et al. 2008).

##### Value Added Intellectual Coefficient (VAIC™)

VAIC™ indicates an organization's intellectual ability. Besides, it is also regarded as BPI (Business Performance Indicator). VAIC™ can be calculated by the formula:

$$VAIC^{\text{TM}} = VACA + VAHU + STVA. \quad (1)$$

Where:

VAIC™ = Value Added Intellectual Coefficient

VACA = Value Added Capital Employee

VAHU = Value Added Human Capital

STVA = Structural Capital Value Added

The steps in calculating VAIC™ are as follows:

1. Calculating the Value Added Capital Employed (VACA)

VACA is the ratio of value added (VA) to the Capital Employee (CE). This ratio shows how much VA that can be produced by the company on the utilization of physical capital.

VACA can be calculated by the formula:

$$VACA = VA/CE. \quad (2)$$

Where:

VACA = Value Added Capital Employee

VA = Value added

CE = Available Funds (equity).

Value added can be calculated by the formula:

$$VA = OUT - IN. \quad (3)$$

Where:

VA = The difference between output and input

Out = Total sales and other revenue

IN = Costs and expenses (other than personnel expenses).

2. Calculating the *Value Added Human Capital* (VAHU)

VAHU is the ratio of Value added (VA) to Human Capital (HC). This ratio shows the contribution made by every IDR invested in human capital (HC) to the organization's value added (VA).

VAHU can be calculated by the formula:

$$VAHU = VA/HC. \quad (4)$$

Where:

VAHU = *Value Added Human Capital*

VA = *Value Added*

HC = *Human Capital* (personnel expenses).

3. Calculating the *Structural Capital Value Added* (STVA)

STVA is the ratio of the SC to the VA. This ratio measures the amount of Structural Capital needed to produce 1 (one) IDR of value added (VA) and is an indication of how the success of Structural Capital (SC) in value creation.

STVA can be calculated by the formula:

$$STVA = SC/VA. \quad (5)$$

Where:

STVA = *Structural Capital Value Added*

SC = *Structural Capital*

VA = *Value Added*

Where:

$$SC = VA - HC. \quad (6)$$

### Company Value

Company value in this study is measured using Tobin's Q. Tobin's Q is an indicator for measuring the company's performance, especially on the value of the company, which shows the management performance in managing the company's assets.

Tobin's Q can be calculated using the formula:

$$Tobin's Q = \frac{(EMV+D)}{(BVE+D)}. \quad (7)$$

Where:

Tobin's Q = Company Value

EMV = Equity Market Value (*Closing price* × number of shares outstanding)

D = Book Value of Total Debt (Total liabilities in the statement of financial position)

BVE = Book Value of Total Equity (Total equity in the statement of financial position)

### Financial Performance

*Return on Asset* (ROA)

Return on Assets (ROA) reflects how large the return generated on every IDR invested in assets (Werner 2013: 64). ROA can be calculated using the formula:

$$ROA = \frac{Net\ Income}{Total\ Asset}. \quad (8)$$

### Return on Equity (ROE)

Return on Equity (ROE) reflects how large the return generated for shareholders on every IDR invested (Werner 2013: 64). ROE can be calculated using the formula:

$$ROE = \frac{Net\ Income}{Total\ Equity}. \quad (9)$$

### Earning per Shares (EPS)

Earning per Shares (EPS) shows how large the ability of the share in generating profit (Sofyan 2013: 306). According to Kieso et al. (2011), EPS can be calculated using the formula:

$$EPS = \frac{Net\ income - preferences\ dividends}{Weighted\ shares\ outstanding}. \quad (10)$$

### Analysis Tools

This study uses Partial Least Squares (PLS) with SmartPLS 2.0 M3 software. Selection of PLS method is based on the consideration that there is a latent variable that is formed with formative indicators. This study aims to examine the effect of intellectual capital on company value with financial performance as an intervening variable, where the variables are called latent variables. The independent latent variables of intellectual capital which are formed by formative indicators are value added capital employed (VACA), value added human capital (VAHU), and structural capital value added (STVA). The dependent latent variable of company value is formed by formative indicators, while the intervening variable of financial performance is formed by reflexive indicators.

### Outer Model Test (Measurement Model)

Outer Model or measurement model is a model that shows how the observed variables represent the latent variables to be measured. In the outer model evaluation, there are two indicators: reflexive indicator and formative indicator.

#### 1. Outer Model Evaluation of Reflexive Indicator

a. Testing the validity of the convergent

This test is performed to determine whether an indicator may be said valid or not to the latent construct. The Rule of Thumb used to assess the convergent validity is by looking at the value of loading factor of each indicator that must be greater than 0.70.

**Table1**  
**Results of Descriptive Statistic Analysis**

	Minimum	Maximum	Mean	Std. Deviation
VACA	0.0505	1.2961	0.3591	0.2542
VAHU	1.1560	8.9924	3.2051	2.0161
STVA	0.1349	0.8888	0.5863	0.1895
VAIC	1.5856	10.1045	4.1505	2.1405
ROA	0.0081	0.2568	0.0464	0.0385
ROE	0.0162	0.6835	0.1488	0.1010
EPS	3.8594	1707.2050	190.7250	372.9141
Tobin's Q	2.0797	0.5128	1.0811	0.2435

**Table 2**  
**Outer Model (Weights or Loadings)**

	Financial Performance
EPS	0.719
ROA	0.860
ROE	0.922

Source: Processed using SmartPLS

b. Discriminant Validity Test.

**b. Testing the discriminant validity**

Testing the discriminant validity with a reflexive indicator is by looking at the value of cross loading for each variable that must be greater than 0.70. In addition, it can also be done by looking at the value of Average Variance Extracted (AVE). The value of AVE recommended is  $> 0.50$ .

**c. Reliability test**

Reliability test is used to verify the accuracy, consistency and precision of instrument in measuring the construct (Latan and Ghazali 2010:79). The measurement of reliability is done in two ways, that is, by looking at the composite reliability and the Cronbach's alpha

**2. Outer Model Evaluation of Formative Construct**

Construct with formative indicator is the relationship between the indicator and the construct. So, to evaluate the outer model is by looking at its relative weight and the significance value of T-statistics (Latan and Ghazali 2012: 232).

**Inner Model Test (Structural Model)**

Inner model or structural model is a model that shows the relationship the power of estimation between latent variables or constructs. To assess the structural model with PLS is done by looking at the value of R-squares for each endogenous latent variable as the predictive power of structural model. A model with R-Squares value of 0.75 indicates that the model is strong. A model with R-Squares value of 0.50 indicates that the model is moderate. And a

model with R-squares value of 0.25 indicates that the model is weak. The results of PLS R-Squares represent the amount of variance of the construct explained by the model (Latan and Ghazali 2012: 82).

**Hypothesis Test**

Testing the effect of mediation with 2.0 SmartPLS is done using procedures developed by Baron and Kenny (1986) in Latan and Ghazali (2012: 181). According to Baron and Kenny, there are three stages of model used to test the mediation effect:

1. Testing the effect of exogenous variable (X) on endogenous variable (Y), and the result should be significant at T-statistics  $> 1.96$ .
2. Testing the effect of exogenous variable (X) on mediating variable (M), and the result should be significant at T-statistics  $> 1.96$ .
3. Testing the simultaneous effect of exogenous variable (X) with mediating variable (M) on endogenous variable (Y). In the final stage of testing, it is expected that the influence of exogenous variable (X) on endogenous variable (Y) is not significant, while the effect of mediating variable (M) on endogenous variable (Y) should be significant at T-statistics  $> 1.96$ .

**4. DATA ANALYSIS AND DISCUSSION**

Based on Table 1, it can be explained that the minimum value of VACA during 2010-2014 is 0.0505, the maximum value is 1.2961, and the mean value is 0.3591. This means that every IDR of equity pro

**Table3**  
**Results of Cross Loadings**

	Intellectual Capital	Company Value	Financial Performance
EPS	0.503575	0.407638	0.719222
ROA	0.507056	0.465598	0.860054
ROE	0.729727	0.381945	0.921801
STVA	0.385417	0.164178	0.265460
TOBIN'S Q	0.402289	1.000000	0.494937
VACA	0.690280	0.201855	0.528242
VAHU	0.234472	0.002983	0.216996

Source: Processed using SmartPLS.

**Table 4**  
**AVE**

	AVE
Financial Performance	0.702230

Source: Processed using SmartPLS.

vided can be used to create value added (VA) of 0.3591. The standard deviation of 0.2542 is smaller than the mean, so it can be said that the value of VACA has a low level of deviation. The lower the level of deviation, the lower the variety of the data. So it can be said that VACA has a good data distribution.

The minimum value of VAHU is 1.1560, the maximum value is 8.9924, and the mean value is 3.2051. This means that every IDR spent on labor (human capital) can provide added value of IDR 3.20 for the company. The standard deviation of 2.0161 is smaller than the mean, so it can be said that the value of VAHU has a low level of deviation. The lower the level of deviation, the lower the variety of the data. So it can be said that the average VAHU has good data distribution. The descriptive statistics of the Value Added Human Capital (VAHU) above indicates that the company is able to produce value added by the release of funds for labor.

The minimum value of STVA is 0.1349, the maximum value is 0.8888, and the mean value is 0.5863, with a standard deviation of 0.1895. This means it requires structural capital as much as 0.5863 to create IDR of added value for the company. The standard deviation of 0.1895 is smaller than the mean). So it can be said that the mean value of STVA has a low level of deviation. The lower the level of deviation, the lower the variety of the data. So it can be said that the average STVA has good data distribution.

This study uses VAICTM (Value Added Intellectual Coefficient) to measure the efficiency of added value to intellectual capital. The minimum value of VAIC, 1.5856 is owned by PT. Magna

Finance Tbk in 2014. The maximum value of VAIC, 10.1045 is owned by PT. Capitalinc Investment Tbk in 2013. The mean value of VAIC of the 67 samples studied during the period 2010-2014 is 4.1505, with a standard deviation of 2.1405. The standard deviation of 2.1405 is smaller than the mean, so the value of VAIC has a low level of deviation. The lower the level of deviation, the lower the variety of the data. So it can be said that the average VAIC has a good data distribution. The mean value of 4.1505 indicates that the average company is able to manage its intellectual capital efficiently so as to generate added value for the company.

ROA shows how much the return (profit) that can be generated by a company on every IDR invested in assets. The minimum value of ROA, 0.0081 is owned by PT. Magna Finance Tbk in 2014. The maximum value of ROA, 0.2568 is owned by PT. Capitalinc Investment Tbk in 2013. The mean value of ROA of the 67 samples studied during the period 2010-2014 is 0.0485, with a standard deviation of 0.0385. This means that every IDR of asset is capable of producing an average profit of 0.0464. The standard deviation of 0.0385 is smaller than the mean), so it can be said that the mean value of ROA has a low level of deviation. The lower the level of deviation, the lower the variety of the data. So it can be said that the value of ROA has a good data distribution.

ROE shows how much the return generated for shareholders on every IDR invested. The minimum value of ROE, 0.0162 is owned by PT. Verena Multi Finance Tbk in 2011. The maximum value of ROE, 0.6835 is owned by PT. Capitalinc Investment Tbk in 2013. It shows that during 2010-2014, PT. Capitalinc Investment has the greatest return for the



**Table 5**  
**Cronbach's Alpha and Composite Reliability**

	Cronbachs Alpha	Composite Reliability
Intellectual Capital		
Financial Performance	0.781848	0.875039
Company Value		

Source: Processed using SmartPLS.

**Table 6**  
**Outer Weight**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (  O/STERR  )
STVA -> IC	1.278601	1.255941	0.296294	0.296294	4.315313
TOBINS Q -> IC	1.000000	1.000000	0.000000		
VACA -> IC	0.962943	0.945282	0.074335	0.074335	12.954075
VAHU -> IC	-0.671698	-0.676949	0.314768	0.314768	2.133949

Source: Processed using SmartPLS.

**Table 7**  
**Results of Inner Test R-Square**

	R Square
Intellectual Capital	
Company Value	0.250863
Financial Performance	0.493266

Source: Processed using SmartPLS.

shareholders on every IDR invested by the shareholders. The mean value of ROE is 0.1488, with a standard deviation of 0.1010. The standard deviation of 0.1010 is smaller than the mean, so it can be said that the value of ROE has a low level of deviation. The lower the level of deviation, the lower the variety of the data. So it can be said that the value of ROE has a good data distribution.

The minimum value of EPS of 3.8594 occurred in 2014, while the maximum value of EPS of 1707.2050 occurred in 2013. The higher the EPS value, the better the company, meaning the larger the company's ability to generate earnings per share. The mean value of EPS during the period 2010-2014 is 190.7250. This shows that the company can produce an average profit of 190.7250 on each share owned by the company during 2010-2014. The standard deviation of EPS during a five-year research is 372.9141, because the standard deviation value of EPS is greater than the mean value. So, it can be concluded that the value of EPS has a high level of deviation. The higher the level of deviation, the higher the variation of data, so it can be said that the EPS does not have a good data distribution data.

Indicator of Tobin's Q can be used to measure the value of the company. The minimum value of Tobin's Q of 0.5128 is owned by PT. Verena Multi

Finance Tbk in 2011. The maximum value of Tobin's Q of 2.0797 is owned by PT. Adira Dinamika Multi Finance Tbk in 2010. The mean value of Tobin's Q for the period 2010-2014 is 1.0811, with a standard deviation of 0.2435. The standard deviation of Tobin's Q of 0.2435 is smaller than the mean value. It can be concluded that the value of Tobin's Q has a low level of deviation. The lower the level of deviation, the lower the variety of data, so it can be said that the average Tobin's Q has a good data distribution.

#### **Data Analysis using PLS (Partial Least Square)**

##### **1. Outer Model (Measurement Model)**

Evaluation of the measurement model or outer model is carried out to assess the validity and reliability of the model. In this research, there are two indicators to be evaluated: reflexive indicator and formative indicator. The independent latent variable of intellectual capital is formed by formative indicators (value added capital employed (VACA), value added human capital (VAHU), and structural capital value added (STVA)). The dependent latent variable of company value is formed by formative indicators. Meanwhile, the intervening variable of financial performance is formed by the reflexive indicators (Return on Assets (ROA), Return on Equity (ROE) and Earning per Shares (EPS)).

**Table 8**  
**Results of Path Coefficients of Intellectual Capital on Company Value**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics ( O/STERR )
IC -> NP	0.451337	0.459598	0.068296	0.068296	6.608589

Source: Processed using SmartPLS.

**Table 9**  
**Results of Path Coefficient of Intellectual Capital on Financial Performance**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics ( O/STERR )
IC -> KK	0.722388	0.743942	0.055783	0.055783	12.949996

Source: Processed using SmartPLS.

**Table 10**  
**Path Coefficient**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics ( O/STERR )
IC -> KK	0.702329	0.724866	0.059728	0.059728	11.758727
IC -> NP	0.107907	0.133556	0.088765	0.088765	1.215655
KK -> NP	0.419151	0.419679	0.157593	0.157593	2.659709

Source: Processed using Smart PLS.

### Outer Model Evaluation of Reflexive Construct

#### a. Convergent Validity Test

Based on Table 2 and Table 3, it can be seen that the cross loading value of EPS to financial performance is 0.719222. The cross loading value of ROA to financial performance is 0.860054. The cross loading value of ROE indicator to financial performance is 0.921801. The results of cross loadings above indicate that these three indicators have the greatest value in comparison with other variables. In addition, the indicators of EPS, ROA and ROE have the cross loading values > 0.70. So, it can be said that these three indicators are valid. The next step for testing the validity of discriminant is to see the value of AVE. The rule of thumb used to assess the AVE should be greater than 0.50. Table 4 is the value of AVE in this study.

The Table 4 shows that the AVE value of the construct with reflexive indicator is 0.702 or above 0.50. The AVE value recommended must be greater than 0.50. This means that 50% or more of the variance of the indicators can be explained.

#### b. Reliability Test

This study uses the composite reliability to test the reliability of a construct. Rule of Thumb is used to assess the reliability of the construct, in which the value of composite reliability must be greater than 0.70. Based on the Table 5, the value of composite reliability in this study is 0.875039. So, it can be said that the construct is reliable or meet the reliability test.

Table 6 shows the results of formative indicator

test to see the magnitude of outer weight for each respective indicator. Based on the Table 6, STVA indicator has T-Statistics value = 4.315313, VACA indicator has T-Statistics value = 12.954075 and VAHU indicator has T-Statistics value = 2.133949. It indicates that the indicators of STVA, VACA and VAHU generate T-Statistics value > 1.96. Therefore, these three indicators are valid and can be used to measure Intellectual Capital (VAICTM).

The different thing is shown by Tobin's Q indicator, where the indicator has a value of 0.000. This is because Tobin's Q is the only indicator of the construct of company value so that the evaluation of the value of outer weight that should have criteria > 1.96 does not need to be discussed, because the indicator has no comparative indicator so as to have a value of 0.000.

#### 2. Inner Model (Structural Model)

Structural model evaluation is used to describe whether the exogenous latent variable has a substantial effect on endogenous latent variable.

Table 7 explains that the R-Square value of the company value is 0.250863, which means that the effect of intellectual capital on company value can be explained by 25.08% and the remaining 74.92% is explained by other variables outside this study. The financial performance in the Table 7 shows the value of R-Square is 0.493266, which means that the effect of intellectual capital on financial performance can be explained by 49.33% and the remaining 50.67% is explained by other variables outside

this research model. So, it can be concluded that the value of R-Square of 0.250863 and 0.493266 shows that the model is weak because of under 0.50.

### 3. Hypothesis Test

#### 1. Testing the effect of Intellectual Capital (X) on Company Value (Y)

From the first hypothesis test in Table 8, it can be seen that the value of T-Statistics is 6.608589. This value is higher than the required value of 1.96 ( $6.61 > 1.96$ ). So, it can be concluded that Intellectual Capital (VAICTM) has an effect on company value. Intellectual Capital (VAICTM) has an effect on company value with the original sample value of 0.451337. The positive value of original sample shows that the direction of the relationship between Intellectual Capital (VAICTM) and company value is positive.

#### 2. Testing the effect of Intellectual Capital (X) on Financial Performance (M) and the significance value of T-statistics should be $> 1.96$ .

Table 9 aims to examine the effect of Intellectual Capital (X) on the mediating variable of Financial Performance (M), and the significance value of T-statistics should be  $> 1.96$ . Based on the Table 9, the effect of intellectual capital on financial performance has a T- statistics value of 12.949996, so it can be said that the intellectual capital has significant influence on financial performance with a T- statistics value greater than 1.96 ( $12.949996 > 1.96$ ).

#### 3. Testing the exogenous variable of Intellectual Capital on endogenous variable of company value with Financial Performance as the intervening variable

In the final phase of testing, it is expected that the effect of exogenous variable (Intellectual Capital) on endogenous variable (Company value) is not significant, while the effect of mediating variable (financial performance) on endogenous variable (Value Company) should have significant value of T-statistics  $> 1.96$ .

The final stage of hypothesis test in this study is to test the effect of Intellectual Capital and financial performance on Company Value. Based on the Table 10, the T-statistics value between Intellectual Capital and Company Value is 1.215655, in which this value is smaller than the T-statistics value required, that is, 1.96. The next stage is to see the influence of mediating variable (financial performance) on company value and should the significant value of T-statistics should be  $> 1.96$ . Based on Table 10, the T-statistics value of Financial Performance on Company Value is 2.659709. So, it can be concluded that financial performance mediates the relationship between Intellectual Capital and Company Value so that the second research hypothesis

is accepted.

## 5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

The results of this analysis can be concluded as follows:

1. The first hypothesis is to test the effect of intellectual capital on company value. The result shows that intellectual capital has an effect on company value. This means that the market gives a high evaluation to the company that has great intellectual capital.
2. The second hypothesis is to test the effect of intellectual capital on company value with financial performance as an intervening variable. The result shows that intellectual capital has an affect on company value with financial performance as an intervening variable. This means that financial performance is able to mediate the relationship between intellectual capital and firm value. Based on the result of the second hypothesis, it can be said that if the company is able to manage its intellectual capital so well that there is an increase in financial performance, it will have an effect on the increase in company value.

This study tries to develop the research that has been done by previous researchers. The limitation in this study, based on the test results of inner models used to explain the influence of the independent variable on the dependent variable, shows that the variables used in this study are still weak in explaining the relationship between the independent variable and the dependent variable. This suggests that there are other variables outside the research that affect the dependent variable in this study.

Based on the research limitations that have been described above, it is suggested that further researches consider the additional use of other variables that can affect the dependent variable such as the disclosure of intellectual capital.

## REFERENCES

- Adrian Gozali and Saarce Elsy Hatane, 2014, 'Pengaruh Intellectual Capital Terhadap Kinerja Keuangan Dan Nilai Perusahaan Khususnya Di Industri Keuangan Dan Industri Pertambangan Yang Terdaftar Di Bursa Efek Indonesia Tahun 2008 – 2012', *Business Accounting Review*, Vol. 2 No. 2 208-217.
- Agnes, U. W. 2008, 'Sebuah Tinjauan Akuntansi atas Pengukuran dan Pelaporan Knowledge', *Paper in The 2<sup>nd</sup> National Conference UKWMS*, Surabaya, 6 September 2008.
- Astuti, Partiw Dwi, 2005, 'Hubungan Intellectual

- Capital dan Business Performance', *Jurnal MAKSI*, Vol. 5, 34-58.
- Bambang Sudiyatno and Elen Puspitasari, 2010, Tobin's Q Dan Altman Z-Score Sebagai Indikator Pengukuran Kinerja Perusahaan, *Kajian Akuntansi*, Vol. 2, No. 9, pp. 9-21.
- Deep, R and Narwal, K. 2014, Pal. 'Intellectual Capital and its Association with Financial Performance : A Study of Indian Textile Sector', *Int J. Manag. Bus. Res*, Vol. 4 No. 1, 43-54.
- Diva Cicilya NAS and Mitha DR. 2014, Pengaruh Modal Intelektual terhadap Nilai Perusahaan dengan Kinerja Keuangan sebagai Variabel Intervening, *Research Methods and Organizational Studies*, pp. 154-166.
- Eskandar Jafari, 2013, 'Intellectual capital and its effects on firms' market value and financial performance in Iran: An investigating public model', *Research Journal of Recent Sciences*, Vol. 2 No. 3, 1-6.
- Fathi, Saeed, Shekoofeh Farahmand, Mahnaz Khorassani, 2013, 'Impact of Intellectual Capital on Financial Performance', *International Journal of Academic Research in Economics and Management Sciences*, Vol. 3, No. 1.
- Husnan, Suad & Pudjiastuti, Enny, 2012, *Dasar-dasar manajemen keuangan*, Edisi Keenam, STIM YKPN.
- Indonesian Capital Market Directoy (ICMD).
- I Gede Cahyadi Putra, 2012, 'Pengaruh Modal Intelektual pada Nilai Perusahaan Perbankan yang Go Publik di Bursa Efek Indonesia', *Jurnal Akuntansi dan Humanika*, Vol. 2, No. 1.
- Iswajuni, Yanuar Firmansyah, 2014, 'Pengaruh Intellectual Capital Terhadap Profitabilitas, Nilai Pasar, Pertumbuhan, dan Actual Return Pada Perusahaan yang Tercatat di Bursa Efek Indonesia', *Jurnal Ekonomi dan Bisnis*, year XXIV, No. 1.
- Kieso, D, Weygandt, J, Warfield, T 2011, *Intermediate Accounting*, Volume 1, United States of America : John Wiley & Sons, Inc.
- Latan, Hengky and Imam Ghazali, 2012, *Partial Least Squares : Konsep, Teknik dan Aplikasi Smart PLS 2.0 M3*, Badan Penerbit Universitas Diponegoro.
- Martha Kartika and Saarse Elsyse Hatane, 2013, 'Pengaruh Intellectual Capital Pada Profitabilitas Perusahaan Perbankan Yang Terdaftar Di Bursa Efek Indonesia pada Tahun 2007-2011', *Business Accounting Review*, Vol. 1 No. 2.
- Mamduh Hanafi and Abdul Halim, 2012, *Analisis Laporan Keuangan*, Sekolah Tinggi Ilmu Manajemen YKPN, Yogyakarta.
- Olivia Sirapanji and Saarse Elsyse Hatane, 2015, Pengaruh Value Added Intellectual Capital Terhadap Kinerja Keuangan dan Nilai Pasar Perusahaan Khususnya di Industri Perdagangan Jasa Yang Terdaftar di Bursa Efek Indonesia, *Business Accounting Review*, Vol. 3, No. 1, 45 - 54.
- Pearce, John A and Robinson, Richard B. 2013, *Strategic Management: Formulation, Implementation, and Control*, 12<sup>th</sup> Edition, translated by Nila Pramita Sari, Jakarta, Penerbit Salemba Empat.
- Pouraghajan, A, Ramezani, A and Mohammadzaneh, S. 2013, 'Impact of Intellectual Capital on Market Value and Firms Financial Performance: Evidence from Tehran Stock Exchange', *World of Sciences Journal*, Vol. 1, No 12 197-208.
- Ranani, Hossein Sharifi and Zivar Bijani, 2014, 'The Impact of Intellectual Capital on the Financial Performance of Listed Companies in Tehran Stock Exchange', *International Journal of Academic Research in Accounting, Finance, and Management Sciences*, Vol. 4, No. 1.
- Sofyan Syafri Harahap, 2013, *Analisis Kritis Atas Laporan Keuangan*, Jakarta: Rajawali Pers.
- Solikhah, Badingatus, Abdul Rohman and Wahyu Meiranto, 2010, 'Implikasi Intellectual Capital terhadap Financial Performance, Growth dan Market Value; Studi Empiris dengan Pendekatan Simplistic Specification', *Symposium Nasional Akuntansi XIII Purwokerto*.
- Sutrisno, 2009, *Manajemen keuangan 'Teori, Konsep dan Aplikasi'*, Yogyakarta: Ekonisia.
- Tri Ciptaningsih, 2013, 'Uji Pengaruh Modal Intelektual terhadap Kinerja Keuangan BUMN yang Go Public di Indonesia', *Jurnal Manajemen Teknologi*, Vol. 12 No. 3.
- Ulum, Ihyaul, Imam Ghazali and Anis Chariri, 2008, 'Intellectual Capital Dan Kinerja Keuangan Perusahaan; Suatu Analisis Dengan Pendekatan Partial Least Squares (PLS)', *Symposium Nasional Akuntansi 11 (SNA 11)*, 23 - 24 July 2008, Universitas Tanjung Pura Pontianak.
- Ulum, Ihyaul, 2009, *Intellectual Capital : Konsep dan Kajian Empiris*, Yogyakarta: Graha Ilmu.
- Werner R Murhadi, 2013, *Analisis Laporan Keuangan: Proyeksi dan Valuasi Saham*, Jakarta : Salemba Empat.
- Yunita, Novelina, 2012, 'Pengaruh Modal Intelektual terhadap Kinerja Keuangan dan Nilai Pasar', *Accounting Journal Analysis*, Vol. 1, No. 1
- <<http://www.bess.co.id/newsdetail.php?id=15>>, viewed 9 April 2015.
- <<http://www.merdeka.com/uang/terburuk-di-asia-ihsg-anjlok-46-persen-rupiah-merosot-4-persen.html>>, viewed 16 April 2015.
- <<http://www.ojk.go.id/lembaga-pembiayaan>>, viewed 30 April 2015.