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# The Effect of Intellectual Capital and Good Corporate Governance on Financial Performance and Corporate Value: A Case Study in Indonesia

Sri ANIK<sup>1</sup>, Anis CHARIRI<sup>2</sup>, Jaka ISGIYARTA<sup>3</sup>

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## Abstract

This study aims to analyze the impact of the company's financial performance in mediating the relationship between Intellectual Capital and GCG on Corporate Value in banking companies listed on the Indonesia Stock Exchange (IDX). Also, this study analyzes the direct effect of intellectual capital and GCG on corporate value and the indirect effect through the company's financial performance. This study develops research of Chen et al. (2005) and measures Intellectual Capital with VAIC (Pulic, 1998). VAIC model is more accurate to measure Intellectual Capital because it can show potential intellectual use efficiently. The data used are banking companies listed on the IDX in 2014–2016 with purposive sampling technique and Data Analysis Technique used are path analysis. The results showed that the financial performance of banking companies was proven to mediate the relationship between intellectual capital and GCG. The role of GCG that can improve financial performance and corporate value is only GCG as measured by the ratio of independent commissioners and audit quality. Meanwhile, the financial performance and corporate value audited by the Big 4 will be greater than the financial performance and corporate value of the banking companies listed on the Indonesia Stock Exchange that are not audited by the Big 4.

**Keywords:** Value Added Intellectual Capital, Good Corporate Governance, ROE, Corporate Value

**JEL Classification Code:** G32, G38, O34

## 1. Introduction

Today, the world economy is developing very rapidly, marked by advances in information technology, intense competition, and growth in innovation that causes many companies to change the way of business. Companies in the banking sector must be able to survive to face competitors so that they are required to change their business from labor-based business to knowledge-based business. Along with economic changes that have the characteristics of a science-based

economy with the application of knowledge management, the prosperity of a company depends on a transformational creation and knowledge capitalization. Solikhah et al. (2020) stated that many business people are aware that the ability to compete does not only lie in the ownership of materialized assets, but rather in innovation, information systems, organizational management, and the human resources they have.

Afiouni (2007) revealed that the Human Resource Management (HRM) practices of an organization can make a significant contribution to sustainable competitive advantage by creating specific knowledge, skills, and culture within the company that is difficult to imitate. Likewise, Luthans & Youssef (2004), and Garcia & Calantone (2002) also revealed that organizations can maintain competitive advantage through the formulation of human resource strategies that are unique and valuable, specific, cumulative, difficult to imitate and replace.

Gunawan (2017) proved that there is an effect of Intellectual Capital (IC) on the financial performance of banking companies listed on the IDX. Wibowo & Sabeni (2013) emphasized that in the future, IC will develop and become a concern because traditional accounting measurement can no longer determine the real value of the

<sup>1</sup>First Author and Corresponding Author. [1] Ph.D. Student, Universitas Diponegoro, Indonesia [2] Lecturer, Faculty of Economics, Universitas Islam Sultan Agung, Indonesia [Postal Address: Jl. Kaligawe Raya KM.4, Terboyo Kulon, Kec. Genuk, Kota Semarang, Jawa Tengah 50112, Indonesia] Email: sriani@unissula.ac.id

<sup>2</sup>Lecturer, Faculty of Economics and Business, Universitas Diponegoro, Indonesia. Email: anis\_chariri@live.undip.ac.id

<sup>3</sup>Lecturer of Faculty of Economics and Business, Universitas Diponegoro, Indonesia. Email: jaka\_isgiyarta2@yahoo.com

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company, IC will play an important role in the company's competitive advantage. Rahman, Sobhan & Islam (2020) also showed a positive and significant relationship between IC disclosure and company performance.

For knowledge-based companies, not financial or tangible assets affect a company's financial performance. Factors such as competitiveness or the ability to create value-added are significantly influenced by intangible assets, which can be called intellectual capital. Intellectual capital such as labor capital, structural capital, and intellectual capital are important components in creating value-added for companies. Corporate value is the investor's perception of the company's success rate related to its share price (Sujoko & Soebiantoro, 2007). Thus, the value of this company can be a benchmark for evaluating whether a company is good or bad.

On the other hand, improving financial performance is carried out by improving corporate governance. The research results of Baki (2001) study found a positive relationship between corporate governance and financial performance. Meanwhile, the research results of Al-Beshtawi et al. (2014) found that corporate governance is enhanced by the application of CG principles, namely forming an audit committee. On the other hand, Solikhah et al. (2020) show that the size of the audit committee, the frequency of audit committee meetings, and disclosure of intellectual capital have a positive effect on market value.

Furthermore, Sulistyanto & Lidyah (2002) emphasized that the Government of Indonesia and the International Monetary Fund (IMF) introduced the concept of GCG as a healthy corporate governance procedure as an economic recovery. This concept is expected to protect stockholders and creditors to recover their investment. Furthermore, the implementation of Corporate Governance in Indonesia is still very low; this is mainly since companies in Indonesia do not fully have a corporate culture as the core of corporate governance (Sulistyanto & Wibisono, 2003). The results of another study conducted by the Asian Development Bank (ADB) identified that corporate governance has become a major policy concern in the wake of the Asian financial crisis. Weak governance structure, poor investment, and risky financing practices of the corporate sector in the affected countries contributed to their sharp economic recession in 1997-1998. The weaknesses in corporate governance and finance undermined the capacity of these countries to withstand the combined shocks of depreciated currencies, mass capital outflows, increased rates, and large contraction in domestic demand (Zhuang et al., 2000).

Eksandyarry (2018) showed that the board of directors affects financial performance, while the independent commissioners, the sharia supervisory board, and the audit committee do not affect financial performance. Jannah (2018) showed different results- the size of the board of

commissioners has a positive and significant effect on the financial performance of Bank Mandiri Syariah and the size of the board of directors. Furthermore, the size of the sharia supervisory board has no significant effect on the financial performance of Bank Mandiri Syariah. On the contrary, Situmorang & Simanjuntak (2019) showed that institutional ownership, the board of directors, and independent commissioners do not have a significant effect on financial performance.

Research on intellectual capital has been carried out by both Indonesian and foreign researchers. Chen et al. (2005) conducted a study on the relationship between intellectual capital and market value and financial performance and found that intellectual capital has a positive effect on market value and company financial performance. Ulum et al. (2014) conducted a study on the relationship between intellectual capital and the performance of banking companies listed on the IDX and found that intellectual capital affects the financial performance of banking companies. Solikhah et al. (2020) showed that intellectual capital is not proven to affect corporate value.

Several studies on intellectual capital's impact on financial performance have shown inconsistent results and also low application of the GCG concept in Indonesia. This study developed research conducted by Chen et al. (2005) on the relationship between intellectual capital and market value and financial performance. However, this study used a different indicator to measure Intellectual Capital. Intellectual Capital in this study was measured by Value Added Intellectual Capital (VAIC), a model developed by Pulic (1998). The VAIC model is more accurate for measuring Intellectual Capital compared to other models because VAIC can show the Value-Added Capital Employed and intellectual potential have been used efficiently by the company. Intellectual capital is very important for a company, so this study also examined the relationship between intellectual capital and company performance and value. This study used banking companies listed on the IDX because recently banking performance has decreased.

## 2. Literature Review

### 2.1. Intellectual Capital (IC)

In the increasingly tight business competition, several companies in carrying out business processes change from labor-based business to knowledge-based business. Companies that apply knowledge-based business will create ways to manage knowledge as a means of obtaining company revenue (Sunarsih, 2012). With the application of knowledge-based business, corporate value creation will change.

One of the variables used in this research is Intellectual Capital (IC), which is the measurement of knowledge

assets that focuses on various fields, such as management, information technology, sociology, and also accounting. IC is an intangible asset that is not easily measured so that this study used the concept of VAIC developed by Pulic (1998).

## 2.2. Value Added Intellectual Capital (VAIC)

The concept of VAIC emerged as a solution for measuring IC by referring to the company's financial information. The VAIC measurement method used a model developed by Pulic (1998) - this model is based on a combination of Value-Added Capital Employed (VACA), Value-Added Human Capital (VAHU), and Structural Capital Value-Added (STVA). According to Pulic (1998), VAIC is calculated by adding up Capital Employed Efficiency (VACA), Human Capital Efficiency (VAHU), and STVA (Structural Capital Efficiency). VAIC comes from the company's ability to create added value. Value-added creation is obtained from the difference between output and input. Pulic (1998) revealed that intellectual ability called VAIC indicates where VACA and intellectual potential sources have been used efficiently by companies. The advantage of the VAIC method is that the required data is easily obtained from sources and types of companies. Data is needed to calculate various standard financial figures is available from the corporate financial statements of the company (Ulum, 2014). The next relationship is value-added and Human Capital (HC) formulated with VAHU.

VAHU denotes a lot of value-added that can be generated with funds spent on labor. The relationship between value-added and Structural Capital (SC) is formulated by STVA. STVA calculates the amount of SC needed to generate 1 rupiah of value-added. Furthermore, by calculating the IC ability by adding the coefficients that have been calculated previously, the results are formulated in VAIC (Ulum, 2014).

VACA is the company's ability to manage resources consisting of capital assets which if managed properly will improve the company's financial performance (Ulum, 2014). VAHU shows the contribution made by every dollar invested in human resources towards the value-added of the organization. Human resources present stock of individual knowledge from an organization that is presented by employees in a book (Ulum, 2014).

STVA calculates the amount of SC needed to produce 1 rupiah of value-added and is an estimate of the value in the book (Ulum, 2014). SC is one of the three primary components of intellectual capital and consists of the supportive infrastructure, processes, and databases of the organization that enables human capital to function. SC is owned by an organization and remains with an organization even when people leave. SC is the company's ability to provide optimal intellectual performance and overall business performance, such as company operating

systems, manufacturing processes, organizational culture, organizational management, management philosophy, and intellectual property owned by the company. Structural capital includes the entire storehouse of human knowledge in the organization, including databases, organizational charts, and procedures.

## 2.3. Good Corporate Governance (GCG)

GCG is a system (input, process, and output) and a set of regulations that regulate the relationship between various interested parties (stakeholders), especially in the narrow sense of the relationship between stockholders, the board of commissioners, and the board of directors for the achievement of company goals. Meanwhile, Forum for Corporate Governance in Indonesia (FCGI) (National Committee on Governance, 2006) defines GCG by adopting the definition from Cadbury Committee of United Kingdom, which: "a set of rules governing the relationship between the company's management shareholders, creditors, government, employees, and other internal and external stakeholders relating to their rights and obligations, or in other words, it is a system that directs and controls the company". Agoes (2006) defined good corporate governance as a system that regulates the relationship between the role of the board of commissioners, the role of directors, stockholders, and other stakeholders. GCG is also referred to as a transparent process for determining company goals, achievements, and performance appraisals.

The implementation of the principles of GCG in every company will be ensured. The principles consist of transparency, accountability, responsibility, independence, and fairness for the survival of a company that is oriented towards the welfare of stakeholders (KNKKG, 2006). Barnhart & Rosentein (1998) divided corporate governance mechanisms to be two groups: external mechanisms (level of debt financing and control by the market) and internal mechanisms (the proportion of the board of directors/commissioners, managerial ownership, and executive compensation). Meanwhile, the corporate governance mechanism is a clear procedure and relationship between those who make decisions and those who control or supervise decisions. Iskander & Chamlou (2009) showed that the mechanisms for monitoring corporate governance are:

### a. Managerial Ownership (KM)

Managerial ownership is defined as the ratio between the number of shares owned by the manager and the total capital managed by the company (Boediono, 2005). From an economic perspective, Shleifer & Vishny (1997) stated that managerial ownership has an incentive value. Providing incentives for opportunistic actions of managers will

increase if managerial ownership is relatively low. Agency problems between owners and management can be adjusted and enhanced through differences in stockholder interests between external and internal corporate management (Jensen & Meckling, 1986). Managerial ownership is measured by a dummy variable with a value of 1 if there is managerial ownership and 0 if there is no.

### **b. Institutional Ownership (KI)**

Institutional ownership is the ownership of shares in a company by financial institutions. Monitoring by institutional investors on the actions of company management will be better than individual monitoring (Utami, 2011). Institutional ownership is measured by the formula:

$$\text{Institutional ownership} = \frac{\text{Total Share of Institutional Ownership}}{\text{Total Share outstanding}}$$

### **2.4. The Proportion of the Board of Independent Commissioner (Kom Ind)**

The board of commissioner is authorized and responsible for overseeing the implementation of activities and management policies and directors in managing company resources to provide advice and be able to achieve organizational goals effectively, efficiently, and economically (Darmawati, 2004). The credibility and independence of the board of commissioners must be built through a corporate governance model. Some factors that must be observed according to (Adrian, 2006), are a). The determination of the number of commissioners must be effective and efficient; b). The educational background of the board of commissioners must be adequate to be able to manage information and formulate strategies to be used; c). Sufficient background experience will provide the sharpness of analysis and the breadth of views. According to the regulation concerning general provisions for the listing of equity securities on the exchange, the minimum number of commissioners is 30% which is measured by the percentage of independent commissioners compared to the total existing commissioners.

### **2.5. Audit Quality (KA)**

The quality of the auditors will determine the quality of the financial statements produced. High-quality auditors are more trusted by users of financial statements than auditors with low quality. To maintain credibility, high-quality auditors are able to detect fraud or misstatement (Lestari, 2012).

In carrying out its functions, the independence of the audit committee members is very important. Independence is needed to prevent insiders from influencing the work and

oversight of the committee and the work of the external auditors. Audit independence is very important so that the auditor's opinion is impartial, unbiased and free from undue influence or conflicts of interest to override professional considerations of the accounting profession (Baridwan, 2009). Audit quality is measured by a dummy variable with a value of 1 if audited by KAP Big 4 and 0 if it does not.

### **2.6. Financial Performance**

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. The term is also used as a general measure of a firm's overall financial health over a given period. Information on company performance, especially profitability, is needed to assess changes in potential economic resources that may be controlled in the future.

A ratio is a measuring tool used in companies to analyze financial statements. By using an analysis tool in the form of financial ratios, it can explain and provide an overview of the observer about the good and bad conditions or financial position from one period to the next. The company's financial performance is measured by Return on Equity (ROE) as the observed ratio to measure the ability of capital to generate profits. ROE is the ratio of net income to general equity (White et al., 2007).

ROE is a ratio that provides investors with insight into how efficiently a company (or more specifically, its management team) is handling the money that shareholders have contributed to it. In other words, it measures the profitability of a corporation in relation to stockholders' equity. The higher the ROE, the more efficient a company's management is at generating income and growth from its equity financing. The calculation can be done by dividing net income by the total stakeholder equity.

### **2.7. Corporate Value**

Corporate value is a condition that has been achieved by a company as an illustration of public trust in the company after going through a process of activity for several years, from the time the company was established up to now. Increasing the corporate value is an achievement, in accordance with the wishes of the owners. Thus, by increasing corporate value, the welfare of the owners will also increase. The corporate value is largely determined by the success or failure of company management in managing assets to generate profits. When profits increase, the corporate value and share price will increase (Weston & Copeland, 2004).

High corporate value is the desire of company owners because high corporate value indicates high stockholder prosperity. The goal of financial management is to maximize corporate value. If the company's activities run well, the value of the company's

shares will also increase, while the value of the company's debt in the form of bonds is not affected at all. The corporate value in this study is measured by Tobin's Q. According to James Tobin (Weston & Copeland, 2004), this ratio is a very valuable concept because it shows current financial market estimates of the return value of each incremental investment dollar/rupiah. Below is the formula of Tobin's Q:

Tobin's Q:

$$Q = \frac{EMV + D}{EBV + D}$$

### 3. Hypothesis

#### 3.1. The Effect of Intellectual Capital (IC) on Financial Performance

IC can play an important role in increasing corporate value and financial performance. (Tan et al., 2007) and (Ulum et al., 2014) have proven that intellectual capital has a positive influence on the company's financial performance. The company's financial performance can be measured by using ROE. ROE is a measure of the profitability of a business in relation to the equity. ROE measures how many dollars of profit are generated for each dollar of shareholder's equity. ROE is a metric of how well the company utilizes its equity to generate profits. (Halim, 2005). In other words, the higher the ROE, the more efficient a company's management is at generating income and growth from its equity financing. This ratio is widely used as a reference for shareholders, to measure the company's ability to earn net income associated with dividend payments. By utilizing IC, the company increases ROE by increasing revenue without increasing expenses and reducing the company's operating expenses. By using the VAIC model to measure a company's IC, the hypothesis is proposed as:

*H1: Intellectual capital has a positive effect on Financial Performance.*

#### 3.2. The Effect of Return on Equity (ROE) on Corporate Value

Martikarini (2011) showed the effect of profitability as measured by ROE on corporate value. The result of the research is that ROE has a significant effect on corporate value. Due to high profits, it will provide a good company prospect so that it can attract investors and increase the demand for shares. If the demand for shares increases, the corporate value also increases. The research results of Sunarsih (2012) showed that financial performance is measured by using ROE as an intervening variable that can mediate the effect between IC and corporate value.

The magnitude of the indirect effect is indicated by a larger coefficient value. The market will give a higher valuation on companies that have increased ROE. In other words, ROE which increases will be responded to positively by the market, thereby increasing corporate value. Based on the description above, the hypothesis is proposed as:

*H2: Financial performance has a positive effect on Corporate Value.*

#### 3.3. The Effect of Intellectual Capital (IC) on Corporate Value

In value creation, it is necessary to utilize the resources owned by the company. These resources include human capital (employees), physical capital (physical assets), and structural capital. The value-added resulting from the value creation process will create a competitive advantage for the company. With a competitive advantage, this will result in increased corporate value because companies that have a competitive advantage can compete and survive in a dynamic business environment. Chen et al. (2005) conducted a study to examine the relationship between IC and market value and company financial performance by using the VAIC model by Pulic (1998). The results of the research indicate that IC has a positive and significant effect on the company's current and future financial performance.

Wicaksana (2011) found that IC has a positive and significant effect on the company's growth and market value. When the company can apply IC well, it will also provide good performance for the company. Based on the concepts and results of previous research that have been described above, the hypothesis is formulated as:

*H3: Intellectual Capital has a positive effect on Corporate Value.*

#### 3.4. The Effect of Managerial Ownership on Corporate Value

According to Pujiati & Widanar (2009), managerial ownership is the proportion of stockholders from management who actively participated in company decision making (directors and commissioners). An increase in corporate value can be achieved if there is a cooperation between company management and other parties, including shareholders and stakeholders in making financial decisions to maximize the working capital they have (Sukirni, 2012).

Managers who have shares in their company will be motivated to maximize profits, the market value of the company, and stockholders' welfare. The managers who have company shares will be more productive in their work to maximize corporate value so that managers will

disclose social information to improve the company's image. However, opportunistic actions taken by managerial stockholders can reduce the company's share price. With opportunistic actions from managerial stockholders, other stockholders will feel aggrieved so that it will impact (negatively) investors' confidence in the company. In other words, the demand for company shares will decrease and the stock price will automatically decrease.

Rizqia et al. (2013) showed a positive effect of managerial ownership on corporate value. Astuti et al. (2020) showed that managerial ownership, profitability, and audit quality had a significant positive effect on IC disclosure. The role of share ownership by management is used to align interests between management and stockholders. The existence of managerial ownership can increase corporate value. Thus, the hypothesis is proposed as:

**H4:** *Managerial Ownership has a positive effect on Corporate Value.*

### 3.5. The Effect of Managerial Ownership on Financial Performance

Jensen & Meckling (1986) suggested that managerial ownership can be a mechanism to minimize managerial and stockholder agency problems by aligning managerial interests. If the manager's share ownership is enlarged, then the interests of external shareholders and managers can be combined so that profits cannot be manipulated by managers for their personal interests. The incentive for the possibility of the opportunistic behavior of managers will increase if share ownership by managers is low.

According to Utami (2010), the motive that supports the increase in corporate value is the percentage of managerial ownership. The research model states that the managerial ownership variable plays a role as corporate governance so that managers' actions can reduce errors and actions that manipulate the amount of company profit. This indicates that managerial ownership has a positive effect on financial performance. Therefore, the hypothesis is proposed as:

**H5:** *Managerial Ownership has a positive effect on Financial Performance.*

### 3.6. The Effect of Institutional Ownership on Corporate Value

Institutional share ownership will encourage more optimal supervision (Pujati & Widanar, 2009). This monitoring mechanism will increase the prosperity of shareholders through their sizable investment in the capital market. This high level of supervision will minimize the level of fraud committed by management which will reduce the corporate value. Ownership

by financial institutions in the form of institutions has a positive effect on corporate value. This means, the greater ownership by institutions in the form will further enhance corporate value (Randoy & Goel, 2003). Institutional investors are becoming important components of companies. They monitor the decisions of the board and help in building effective corporate governance practices in the firm. Large institutional investors can convey private information that they obtain from management to other shareholders. Sukirni (2012) showed that institutional ownership has a significant positive effect on corporate value. The greater the institutional ownership, the more efficient the utilization of company assets, and it is also hoped that it can act as a prevention against waste and profit manipulation by management to increase corporate value. Therefore, the hypothesis is proposed as:

**H6:** *Institutional Ownership has a positive effect on Corporate Value*

### 3.7. The Proportion of the Independent Board of Commissioners on Corporate Value

The increase in corporate value is indirectly influenced by the presence of independent commissioners (Pamungkas, 2012). If the structure of the board of directors comes from external to the company, then there will be less manipulation. Independent directors act as a guide to the company. Their roles broadly include improving corporate credibility and governance standards functioning as a watchdog, and playing a vital role in risk management. Independent directors play an active role in various committees set up by the company to ensure good governance. Thus, Utami (2010) concluded that independent commissioners have a significant negative effect on discretionary accruals. The better the proportion of the board of commissioners, it will reduce the occurrence of moral hazard, and then the corporate value will be better. Therefore, the hypothesis is proposed as:

**H7:** *The proportion of the board of commissioners has a negative effect on Corporate Value.*

### 3.8. The Effect of Audit Quality on Corporate Value

A qualified auditor will have independence in attitude and sufficient competence to ensure the integrity of the numbers reported by the manager. Auditors with high quality are more trusted by users than auditors with low quality because auditors with high quality are more effective in auditing to maintain their credibility (Lestari, 2012). Therefore, the hypothesis is proposed as:

**H8:** *Audit Quality has an effect on Corporate Value.*

#### 4. Research Model

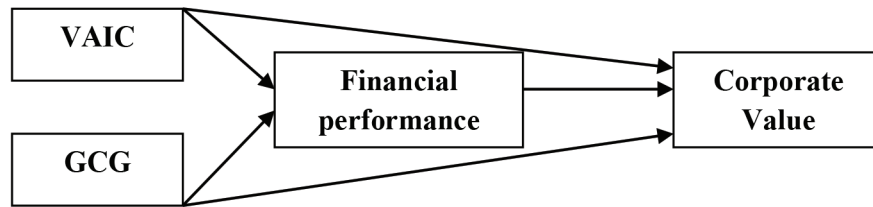


Figure 1: Research Model

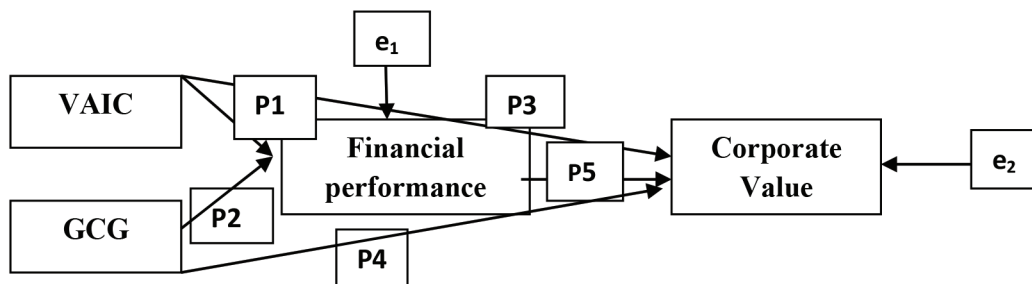


Figure 2: Path Analysis of the Effect of Intellectual Capital and Good Corporate Governance on Financial Performance and Corporate Value

#### 5. Research Methods

##### 5.1. Population and Sample

The population in this study are banking companies listed on the IDX in 2014-2016. Sampling in this study used a purposive sampling technique with the following criteria: (a) Banking sector companies listed on the IDX consecutively during 2014 to 2016 (b) Did not conduct mergers or acquisitions during 2014 to 2016 and (c) Has a positive equity book value during 2014 to 2016.

##### 5.2. Measurement

An operational definition is a definition given to a variable by giving the meaning needed to measure a variable (Anshori & Iswati, 2009). Measurement of Intellectual capital variable used a model developed by Pulic (1998), namely the VAIC method. This model is based on a combination of physical capital (VACA), VAHU, and STVA. Measurement of GCG consists of (1). Managerial ownership uses dummy variables, with a value of 1 if there is managerial ownership and a value of 0 if there is no (Herawaty, 2008), (2). Institutional ownership is calculated by dividing the number of shares of institutional ownership by the total number of shares outstanding, (3). The proportion of independent commissioners is measured by dividing the number of independent commissioners by the total number of commissioners (4). Audit quality is measured by a dummy variable with a value of 1 if audited by KAP Big

4 and 0 if it does not. Financial performance is measured by ROE as the observed ratio to measure the ability of capital to generate profits. ROE is the ratio of net income to general equity. Besides, corporate value is measured by Tobin's Q.

##### 5.3. Data Analysis Technique

###### 5.3.1. Path Analysis Test

The data analysis technique in this study used path analysis. According to Sarwono (2006), path analysis is an analysis technique used to analyze the inherent cause and effect of the relationship among variables arranged based on temporary order by using the path coefficient as a value measure in determining the magnitude of the effect of exogenous independent variables on endogenous dependent variables. The path model has two types of effects. The first is the direct effect, and the second is the indirect effect. When the exogenous variable has an arrow directed towards the dependent variable, then it is said to be the direct effect. When an exogenous variable has an effect on the dependent variable, through the other exogenous variable, then it is said to be an indirect effect. To see the total effect of the exogenous variable, we have to add the direct and indirect effects. One variable may not have a direct effect, but it may have an indirect effect as well. Meanwhile, the effect of other factors (error) is the effect of other variables outside the path model being studied. The path coefficient on the relationship between variables is called the standardized coefficient Beta

as it is used as the path value  $P_1, P_2, P_3, P_4, P_5$  which will be used to calculate the direct, indirect, and total effect.

The equation of path analysis;

$$\text{Financial Performance} = \beta_1 \text{IC} + \beta_2 \text{GCG} + e_1 \quad (1)$$

$$\text{Corporate Value} = \beta_3 \text{IC} + \beta_4 \text{GCG} + \beta_5 \text{Financial Performance} + e_2 \quad (2)$$

Note:

$$e_1 \text{ and } e_2 = \sqrt{1 - R^2}$$

To prove that the financial performance variable is an intervening variable between the effect of intellectual capital on corporate value, and GCG on corporate value, the equation is set as follows:

1. If  $P_1 P_5 > P_3$ , the financial performance is proven as an intervening variable between intellectual capital and corporate value.
2. If  $P_2 P_5 > P_4$ , the financial performance is proven as an intervening variable between GCG and corporate value

## 6. Results and Discussion

### 6.1. Description of Respondents

The 28 banking companies listed on the IDX in 2014–2016 were sampled and met the criteria set out in this study. With the cross-sectional pooled data system, namely by combining cross-section data and time series for three consecutive years, the total data processed was 84.

### 6.2. Descriptive Statistics

Descriptive statistics aims to provide an overview or description of data from the mean, standard deviation, maximum, and minimum values. The results of the descriptive statistics are described in Table 1 below:

**Table 1:** Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Intellectual Capital	84	-5.122	54.453	3.1741	6.75726
Managerial Ownership (KM)	84	0.000	1.000	0.15546	0.171930
Institutional Ownership (KI)	84	0.0997	0.486	0.24717	0.071068
The Board of Independent Commissioner (Kom Ind)	84	0.0862	1.000	0.13975	0.04259
Audit Quality (KA)	84	0.000	1.000	0.16393	0.17256
Financial Performance (ROE)	84	0.0059	0.539	0.13065	0.09477
Corporate Value	84	0.0419	6.461	0.3427	0.74247

Based on Table 1, it can be known that the mean values of banking companies in Indonesia for the variables of intellectual capital, audit quality, managerial ownership, and corporate value are smaller than the standard deviation. This indicates that the distribution of data of intellectual capital, audit quality, managerial ownership, and corporate value is unequal. Meanwhile, the mean values for the variables of institutional ownership, independent commissioner, and financial performance are greater than the standard deviation. This indicates that the distribution of data for the variables of institutional ownership, independent commissioner, and company performance are equal.

### 6.3. Path Analysis

The effect of financial performance in mediating the effect of intellectual capital on corporate value and GCG on the corporate value can be known by using the path analysis technique. The IC variable will be measured by using a more accurate method that is the VAIC model developed by Pulic (1998). The results of the path analysis which shows the effect of financial performance in mediating the effect of intellectual capital on corporate value, and GCG on corporate value are described in the following Table:

Equation (1) can be formulated as:

$$\begin{aligned} \text{Financial Performance} = & 0.280\text{IC} - 1.388 \text{KM} \\ & + 1.204 \text{KI} - 4.844\text{Kom Ind} \\ & + 0.963 \text{KA} + e_1 \end{aligned}$$

Equation (2) can be formulated as:

$$\begin{aligned} \text{Corporate Value} = & 0.122\text{IC} - 0.605 \text{KM} + 0.525 \text{KI} \\ & - 2.111\text{Kom Ind} + 0.326 \text{KA} + \\ & 0.218\text{ROE} + e_2 \end{aligned}$$

Based on Table 2 above, the direct and indirect effects can be explained as follows:



**Table 2:** The Effect of Intellectual Capital, GCG, and Financial Performance on Corporate Value

Independent variable	Model 1	Model 2
Intellectual Capital	0.280*	0.122
Managerial Ownership (KM)	-1.388*	-0.605*
Institutional Ownership (KI)	1.204	0.525
the Board of Independent Commissioner (Kom Ind)	-4.844*	-2.111*
Audit Quality (KA)	0.963*	0.326*
Financial Performance (ROE)		0.218*
* significant at 5%	$R^2 = 0.198$	$R^2 = 0.350$

The result of the interaction of  $P_1P_5$  is 0.06104\*, which is smaller than the  $P_3$  value of 0.122\* but not significant. This shows that the impact of financial performance is proven to mediate the relationship between Intellectual Capital as measured by VAIC and corporate value. This shows that the value of banking companies listed on the Indonesia Stock Exchange will increase if the financial performance increases first. With the magnitude of  $e_1$  (the variance of financial performance variable that cannot be explained by the IC and GCG is  $0.89554(e_1 = \sqrt{1 - R^2} = 0.89554)$ ).

The result of the interaction of  $P_2P_5$ , where GCG is represented by Managerial Ownership (KM), is -0.302584\*, which is smaller than the  $P_4$  value of -0.605\*. The results of the interaction of  $P_2P_5$ , where GCG is represented by Institutional Ownership (KI), is 0.262472\*, which is smaller than the  $P_4$  value of 0.525. Furthermore, the result of the interaction of  $P_2P_5$ , where GCG is represented by the Independent Commissioner (Kom Ind), is 1.055992\*, which is smaller than the  $P_4$  value of -2.111\*. Likewise, the results of the interaction of  $P_2P_5$ , where GCG is represented by Audit Quality (KA), is 0.209934\*, which is smaller than the  $P_4$  value of 0.326\*.

This shows the total effect of both direct and indirect effects on GCG (as measured by Managerial Ownership, Institutional Ownership, Independent Commissioners, and Audit Quality) is -1.164186\*. These results also indicate that the role of GCG (as measured by Managerial Ownership, Institutional Ownership, Independent Commissioner, and Audit Quality) of banking companies listed on the Indonesia Stock Exchange is able to increase corporate value by increasing their financial performance as measured by ROE. With a value of  $e_2$ , Variant of corporate value that cannot be explained by IC, GCG, and financial performance, which is 0.8063 ( $\sqrt{1 - R^2} = 0.8063$ ).

Based on equation (1) above, the results also show that banking companies listed on the Indonesia Stock Exchange that have managerial ownership have a smaller financial

**Table 3:** T-Test Results

Hypothesis	t	Sig.	Results
Intellectual Capital on financial performance	2.640	0.010	H1 is accepted
Intellectual Capital on corporate value	1.233	0.221	H2 is rejected
Financial performance on corporate value	2.037	0.045	H3 is accepted
Managerial Ownership on Financial Performance	-2.829	0.005	H5 is rejected
Managerial Ownership on corporate Value	-1.321	0.007	H4 is rejected
Institutional Ownership on corporate Value	0.486	0.263	H6 is rejected
Independent Commissioner on corporate value	-1.189	0.027	H7 is accepted
Audit Quality on corporate Value	1.059	0.034	H8 is accepted

performance than the financial performance of banking companies listed on the Indonesia Stock Exchange that do not have managerial ownership. Meanwhile, the financial performance of banking companies listed on the Indonesia Stock Exchange and audited by Big 4 is better than the financial performance of banking companies listed on the Indonesia Stock Exchange that are not.

Equation (2) above shows that the value of banking companies listed on the Indonesia Stock Exchange and having managerial ownership has a greater company value. Likewise, banking companies listed on the Indonesia Stock Exchange and audited by Big 4 have a better corporate value than banking companies listed on the Indonesia Stock Exchange that are not audited by the Big4.

The results of hypothesis testing are shown in Table 3:

Table 3 above shows that H1, H3, H7, and H8 are accepted, while H2, H4, H5, and H6 are rejected.

#### 6.4. Discussion

Based on the results of data analysis, it shows that the impact of financial performance is proven to mediate the relationship between intellectual capital and good corporate governance on corporate value. This means that the role of intellectual capital and good corporate governance in improving financial

performance is very high, which in turn will increase corporate value. Therefore, H1 which states intellectual capital has a positive effect on financial performance is proven. This is because ROE shows the success or failure of management in maximizing the return on investment from shareholders on the income related to the amount invested, by utilizing intellectual capital as measured by VAIC which comes from the company's ability to create added value. The VAIC is the calculation of VAHU and STVA. By creating value-added, banking companies listed on the Indonesia Stock Exchange will improve their financial performance by increasing profits generated from the funds invested by shareholders. Furthermore, the service sector (banking) can take advantage of innovations created to compete in providing value to improve services to consumers. This study supports the research of Ulum et al. (2014) and Yunita (2012).

Meanwhile, H3 which states intellectual capital has a positive effect on corporate value cannot be accepted. Intellectual capital may be a long-term investment that the company cannot directly benefit from. Therefore, this condition is not responded to by the market. The market needs real proof in the form of profits generated by the company. Based on the theory, the company's investment in the intellectual capital presented in the financial statements results from an increase in the difference between market value and book value. If the market is efficient, investors will give a high value to companies that have greater intellectual capital. Physical capital as part of intellectual capital becomes a resource that determines the company's performance. Besides, if intellectual capital is a measurable resource for increasing competitive advantages, then intellectual capital will contribute to company performance, not corporate value.

The results showed that H2 which states financial performance has a positive effect on corporate value is rejected. This is because financial performance shows the success or failure of management in maximizing the return on investment of shareholders on the number of shares invested. If the company's ability to generate profits from each equity increases, investors (shareholders) expect the company to distribute dividends. Dividends are a reflection of the profits earned by investors (shareholders) who invest their capital, so this is considered good information and is responded to positively by investors (shareholders). Further, it will increase the share price and corporate value.

These results also indicate that the role of GCG (as measured by Managerial Ownership, Institutional Ownership, Independent Commissioner, and Audit Quality) of banking companies listed on the Indonesia Stock Exchange is able to increase corporate value by increasing their financial performance as measured by ROE. The results of these studies indicate that the role of good corporate governance can improve financial performance and further also increase

corporate value. The results also show that H4, H5, and H6 are rejected, and only H7 and H8 can be accepted. This means the role of GCG that can increase corporate value is only GCG as measured by an independent commissioner and audit quality. The smaller the ratio of independent commissioners, the higher the financial performance and value of banking companies listed on the Indonesia Stock Exchange. The financial performance and value of 'go public' banking companies in Indonesia whose financial reports are audited by Big 4 will be greater than those that are not. Previous researchers have shown a relationship direction between GCG and financial performance (Wruck, 1989; Mitton, 2002; Randoy & Goel, 2003; Chen et al., 2005).

## 7. Conclusion

Based on the results, it shows that the role of intellectual capital and good corporate governance in improving financial performance is very high which in turn will increase corporate value. Measuring intellectual capital with VAIC will increase the company's ability to create value-added. Thus, banking companies listed on the Indonesia Stock Exchange will improve their financial performance by increasing the profits generated from the funds invested by shareholders. VAIC is a long-term investment that the company cannot directly benefit from so that the market does not respond to this condition. The market needs real proof in the form of profits generated by the company.

The role of GCG can improve financial performance and further increase corporate value. The results also showed that only H7 and H8 can be accepted. This means the role of GCG which can increase corporate value is only GCG as measured by independent commissioners and audit quality. The smaller the ratio of independent commissioners, the higher the financial performance and value of banking companies listed on the Indonesia Stock Exchange. The financial performance and value of 'go public' banking companies in Indonesia whose financial reports are audited by Big 4 will be greater than those that are not.

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