# Corporate Governance-Driven to Intellectual Capital and Corporate Performance

# (Empirical Study in Indonesian Banking Industry)

**Idrianita Anis**
*Economic Faculty Trisakti University, Jakarta - Indonesia*
*Idrianita_anis@yahoo.com*

***Abstract***

*The emergence of knowledge economy marked by growing importance of intangible assets. Knowledge assets or intellectual capital are becoming more critical in the corporate value creation. The efficiency in value added intellectual capital investment is becoming important since it would contribute to the company long term competitive advantage.*

*The purpose of this study is to investigate the influence of corporate governance (CG) mechanisms in facilitating the relationship between intellectual capital (IC) efficiency and corporate performance in Indonesian banking industry. CG mechanisms includes internal and external mechanisms, that is measure by board of commissioner effectiveness, audit committee effectiveness, institutional ownership and external auditor. IC efficiency measured by Value Added Intellectual Coefficient (VAIC$^{TM),}$ that is value added (VA)accumulation from physical capital, human capital and structural capital (Pulic, 1998). While Corporate performance measured by Tobin's Q, ROA and ROE.*

*We use purposive sampling method to select 30 companies from banking industry in Indonesia for three years (2009-2011) from Indonesia Stock Exchange (IDX) data base. Data are analyzed using Structural Equation Model with SmartPLS.*

*The findings show that IC efficiency and CG mechanisms significantly influence the corporate performance in Indonesian banking industry. CG mechanisms moderate the relationship of IC efficiency to corporate performance. Overall, the empirical findings suggest that human capital (HCE) and structural capital (SCE) are the significant indicators for VAIC$^{TM}$ while CG internal mechanisms (board of commissioner effectiveness, audit committee effectiveness and institutional ownership) become the significant indicators for CG mechanisms.*

***Keyword:*** *corporate governance mechanism, intellectual capital, value added intellectual coefficient (VAIC$^{TM}$), human capital, structural capital, physical capital, and tobin's Q. ROA, ROE.*

## INTRODUCTION

The new economic era have been encouraging changes in corporate nature of work as well as perception in corporate performance's parameters. Global business

community believes intangible assets play an important role in value creation (Saleh et.al., 2008). Proportion of intangibles has been increasing significantly in business today. The proportion of intangibles showed 20% in 1978, 55% in 1988, and 70% in 1998 (Blair, 2001). Standard and Poor Companies reported growing difference of Book Value to Market Value Ratio; 1:1 in 1970, and 1:6 in 2000, for company in US (Robert, 2000). This phenomenon has reflected that the existing accounting system cannot meet the requirements of modern companies with value creation as their core business. Many researcher noted the large gap resulted from failure to report some 'hidden value' in annual report (Brennan & Cornell, 2000; Mouritsen et. al., 2004). And it is perhaps explain the role of Intellectual Assets.

The term of Intangibles and intellectual capital are often used interchangeable. Intangibles are defined as assets without physical substance, held for use in the production, have characteristics of valuable, uniqueness, non-replicable, non-substitutable , and have capability to become strategic assets (Barney, 1951; Godfrey & Hill, 1995; McGrath, MacMillan & Venkatraman, 1995; Petty & Guthrie, 2000; Mauritzen, 1988). Pulic (2000) develop *Value Added Intellectual Coefficient* (VAIC$^{TM}$) a monetary-based measurement of intellectual capital that emphasizes on value creation. VAIC$^{TM}$ is value added accumulation from human, structural and physical capital.

Corporate governance is a set of rules that define the relationship between shareholders, managers, creditors, the government, employees and other internal and external stakeholders in respect to their right and responsibility. Management should be able to adapt themselves in response to global competition. IC phenomenon in Indonesia companies started to develop after implementation of SFAS 19 (2000). There has been an increase interest in exploring IC efficiency as well as how CG mechanisms influence the IC performance in Indonesian public company listed in IDX. It needs new maps and new paradigms toward governance system to protect the stakeholders rights. A basic tenet of Intellectual Capital (IC) is that increase investment on intellectual assets of organization would significantly translate into superior organization performance.

The purpose of this study is to investigate how CG mechanisms influence in relationship of IC efficiency toward corporate performance in Indonesian banking industry. Banking industry is one of the most IC intensive, and highly regulated industry (Kamath, 2006; Mavridis, 2005; and Firer and William, 2003). Study will be held by Structural Equation Modeling with SmartPLS. In this study IC Efficiency (ICE) is a construct with formative indicators; Human capital efficiency (HCE), Structural capital efficiency (SCE) and Capital employed efficiency (CEE). CG mechanisms is a construct with formative

indicators; Board of commissioner effectiveness (BOCEFF), Audit committee effectiveness (ACEFF), Institutional ownership (IO) and External Auditor (BIG4). While Company Performance (CP) is construct with reflective indicators; Tobin's Q, ROA, dan ROE.

## LITERATURE REVIEW

### Corporate Governance

Organization for Economic Co-operation and Development / OECD (2004) defined corporate governance as:

*" A set of relationship between a company's management, it's board and it's shareholders. Corporate governance also provide the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide proper incentives for the board and management to pursue objectives that are in the interest of the company and its shareholders and should facilitate effective monitoring".*

Study of corporate governance requires an understanding agency theory. Smith, in the Wealth of Nation (1976) suggested that a manager with no direct ownership of a company would not make the same decisions, nor exercise the same care as would an owner of that company. The agency problem in such a relationship results when the agent seeks to maximize personal utility by acting in self-interest which is not always in the best interests of the principal (Jensen & Meckling, 1976). One form of agency problem, known as adverse selection, can occur if the agent misrepresents his ability to perform the functions assigned. Moral hazard, another form of agency problem, occurs if the agent shirks responsibilities or otherwise underperforms through lack of sufficient dedication to the assigned duties (Eisenhardt, 1989). Additionally, a risk of under-performance results in a residual cost to the principal, even if the agent acts in the best interest of the principal and is appropriately qualified to undertake the assigned responsibilities (Jensen & Meckling, 1976).

In order to mitigate agency costs, a principal will establish controls and reporting processes to monitor agent behavior and to evaluate agent performance outcomes (Fama, 1980; Jensen & Meckling, 1976; Petersen, 1993). Agency costs can be reduced by aligning the interests of the agent with those of the principal, most often accomplished through compensation plans (Eisenhardt, 1989; Fama, 1980; Jensen & Meckling, 1976).

To address the urgency of CG best practice, many countries including Indonesia have developed their own code of Good Corporate Governance. Most of them are based on the suggested global references such as World Bank and OECD plus the specific's

industries and regulatory framework. In Indonesia Code of Good Corporate Governance that was issued in May 2000 by National Committee on Corporate Governance (NCCG), and the Minister Decree of SOEs No. 117/2002, the company is expected to disclose material foreseeable risk factors, including management assessment of the business climate and risk factors. The Letter of Public Notification No.SE.03.IPM/2000 issued on May 5, 2000 set down that in order to promote Good Corporate Governance companies are required to have independent commissioners, audit committees and corporate secretaries.

**Intellectual Capital**

The intangible assets are defined as non-financial asset without physical substance that are held for use in the production, or supply of goods or services, or for rental to others, or for administrative purpose (Eipten & Mirza, 2005). Intangible assets are identifiable and controlled by the enterprise as a result of past events with future economic benefits are expected to flow.

Two approaches to measure intellectual capital as suggested by Luthy (1998) and Williams (2000): 1) Indirect methods or financial measure; EVA and MVA, Market to Book Value models, Tobin'sQ, ROA, VAIC™ by (Pulic, 1998). 2) Direct or scorecard methods; an estimation of the monetary value of intangible assets by identifying its various components. Identification of the various components is cumbersome and purely internal affair of the company. Some of direct or scorecard methods are *Skandia navigator* and *Balance Scorecard* (Kaplan & Norton 1992). Among the above approaches, the balanced scorecard (Kaplan & Norton, 2004) is by far the most well-known. However no single method can fulfill all purposes; one must select method depending on purpose, situation and audience' (Sveiby, 2001).

Pulic (1998) uses Value Added Intellectual Coefficient (VAIC$^{TM}$) in measuring IC efficiency. VAIC™ provides information about the value creation efficiency of tangible and intangible assets of the company. VAIC™ is value added accumulation from human capital, structural capital, and physical capital. VA Human capital describes the company collective resources that create value through innovation, whereby human capital, as the decisive value creation factor. That is why education and training programme as well as knowledge management are becoming crucial in supporting work related knowledge and work related competence of employee. Structural capital describes internal and external capital structure of the company that facilitate human capital in value creation. Internal structure covers corporate culture, management process, information systems, and data base. While external structure covers customer capital, distribution channels etc. Physical

capital is the value added that comes from physical resources such as fund (equity, net income).

The following is VAIC$^{TM}$ method by Pulic (2000).

$$ICE = HCE + SCE + CEE \quad (1)$$
$$VAIC^{TM} = VAHC + VASC + VACE \quad (2)$$

The first step in calculating HCE, SCE and CEE is to determine a firm Total Value Added. Value Added (VA) is basicly the Output less Input which represent the value created by the company during the particular financial period. Therefore VA is defined as an increase in the net value of the company due to it's operation, calculated by the operating profit before allocation of its asset cost, non-direct expense and its distribution to stakeholders. Value Added concept is economic profit that is measured as the difference between total revenue and total expense including capital cost (Marshal, 1980). Further explanation by Riahi & Belkaoui (2003), Value Added is technically the summation of profit retained for the year(ΔR), interest expenses(Intr), salary and wages or employee cost(EC), depreciation and amortization (Depr), dividen(Div) and tax for government(Tax), as follows:

$$\Delta R = Rev - Purch - Depr - EC - Intr - Div - Tax \quad (3)$$
$$Rev - Purch - Depr = EC + Intr + Div + Tax + \Delta R \quad (4)$$
$$Net\ Value\ Added = EC + Intr + Div + Tax + \Delta R \quad (5)$$

Where :
ΔR = Changes in Retained Earning
VAIC$^{TM}$ = Value Added Intellectual Coefficient
HC = Employee cost, Investment in salary, training dan education of employee.
CE = Fund (Equity, Net Income)
SC = VA - HC
HCE = Human Capital Efficiency = VA/HC
SCE = Structural Capital Efficiency = SC/VA
CEE = Capital Employed Efficiency = VA/CE

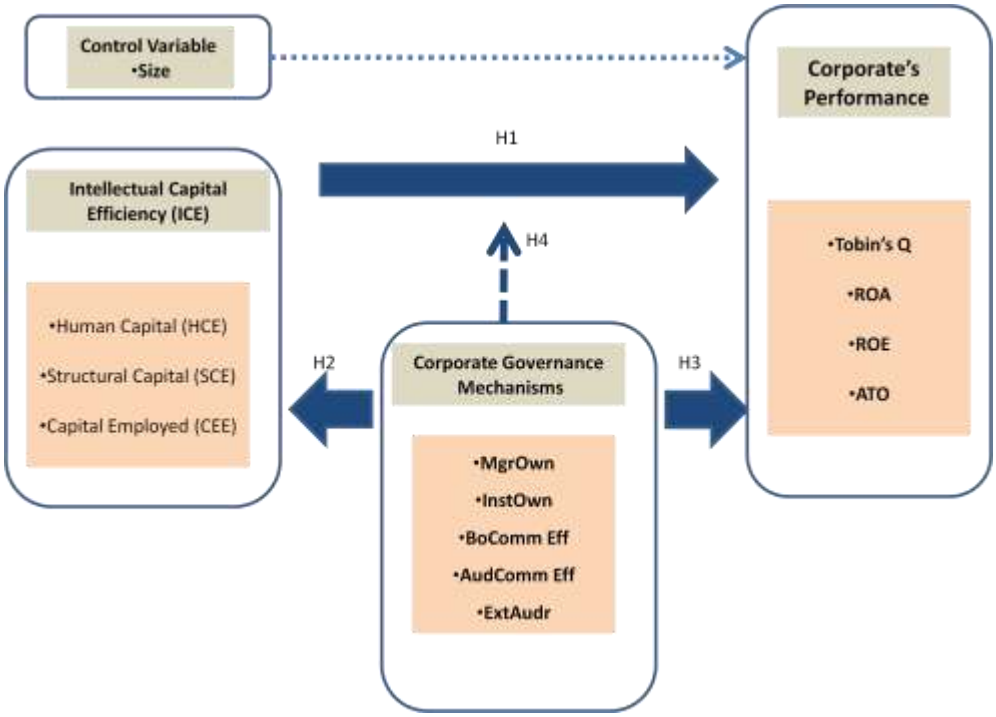
**Corporate Performance**

There are numerous measures of financial performance that have been used in governance studies. Tobin's Q by James Tobin (1969) measure corporate performance by the ratio of market value of equity, total liabilities and total asset. Other Financial

performance used is profitability ROA, ROE, the ratio of income to total assets (ATO) refers to the study Chen et al. (2005) and Firer and William (2003).

## FRAMEWORK OF THINKING

**Figure 1: Framework**




## RESEARCH QUESTION AND HYPOTHESIS

The value creation path; vision, strategy and leadership are the important component in IC management (Peppard & Rylander, 2001). The increasing monetary value in IC investment in bank, lead to the greater demands for transparency and accountability of IC efficiency.CG mechanisms become relevant issue in IC management. Bank has more diverse stakeholders, many depositors, more diffuse equity ownership, and due to restrictions that makes for less incentives for monitoring. Government, instead of depositors, debt-equity holders takes the role of monitoring. CG mechanisms on IC affects bank's risk-taking. Good CG mechanisms will lead to less risk at the corporate level and country level by fewer default and fewer financial crises, as well as improving the performance valuation.

The study related to intellectual capital in bank industry are; Ummu (2008) found the intellectual capital influence firm performance in banking sector in Indonesia;

Appuhami (2005) found that intellectual capital efficiency have impact to the investors' capital gains in finance and insurance industry in Thailand. Mavridis (2003), found that the intellectual capital of the Japanese banking sector have impact on bank performance.

The description above lead to the following hypothesis.

H1: There is positive influence on Intellectual Capital Efficiency toward Corporate Performance.
H2: There is positive influence on Corporate Governance Mechanisms toward Intellectual Capital Efficiency
H3: There is positive influence on Corporate Governance Mechanisms toward Corporate Performance
H4: Corporate Governance Mechanisms moderate the influence of Intellectual Capital Efficiency toward Corporate performance.

## RESEARCH METHOD

### Variable and Measurement

**Independent Variable :** Intellectual Capital Efficiency (ICE) is measured by VAIC$^{TM}$ (Pulic, 2000). ICE will be served as construct latent variable with formative indicator human capital efficiency (HCE), structural capital efficiency (SCE) and capital employed efficiency (CEE).

**Dependent Variables:** Corporate performance is a construct latent variable with reflective indicators; Tobin's Q, ROA dan ROE.

Tobin's Q = (MVE+ DEBT)/TA
ROA = Net Income : Total Asset
ROE = Net Income : Total Equity

**Intervening Variable:** Corporate Governance Mechanism (CGM) is the system by which companies are directed and controlled focusing on the internal and external corporate structures in the intention of monitoring performance. CG mechanisms is a construct latent variable with formative indicators : Board of Commissioners Effectiveness (BOCEFF), Audit committee effectiveness (ACEFF), Institutional ownership (IO), and External Auditor (BIG4).

BOCEFF and ACEFF are measured by CG mechanism check list by Hermawan (2009). 17 items checklist related to report of BOCEFF and 11 items from ACEFF are

measured from aspect of Independency, Activity, Size, Expertise and Competence. We rank level of CG mechanism by giving the score as follows:

Good (3) : fulfill all the criteria of governance mechanism
Fair (2) : partially fulfill the criteria
Poor (1) : Not fulfill the criteria, or no information.

Institutional Ownership (IO) is percentage amount of stocks in a firms held by institution. Its proportion is measured by its ownership percentage.

External audit (BIG4) is CG external mechanism by public accounting firm that conducted audit process. It is measured by (1) for the big four, and 0 for non-big four. Francis and Yu (2009) proved that audit quality by big4 (*Price Waterhouse Coopers, Erns & Young, Deloite, and KPMG*) perceived to have higher quality. This is because the big4 is estimated to have a better experience in the audit.

**Control variable:** Size of the company become control variable that is measured by : Logarithm of Total Asset.

**Population and Sample**

The study uses secondary data obtained from the Capital Market Reference Center (PRPM) Indonesian Stock Exchange (IDX). This study uses times series data. By using purposive sampling method, we choose 30 companies from banking industry. The sample criteria are the bank that has positive earnings and consistently publish financial statements for the year 2009-2011.

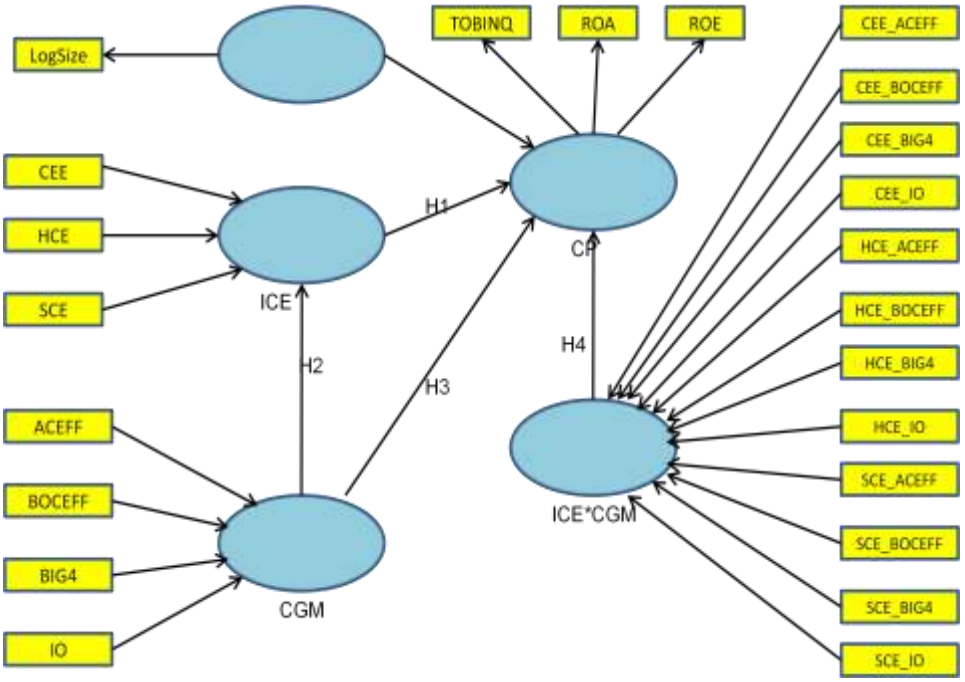
**Statistical Test and Guidelines**

This research combines descriptive and causal research (Ghauri & Gronhaug, 2005). The descriptive research provides descriptions on IC Efficiency, CG Mechanism and Corporate Performance. The causal research provides information on the influence of IC Efficiency toward Corporate performance and how the CG Mechanisms moderate the relationship of IC Efficiency to Corporate Performance.

Analysis was performed using Structural Equation Model using SmartPLS. Since we have defined construct with formative and reflective indicators, PLS is an appropriate tool to examine predictive model.

Figure 2 below describe proposed structural model with the hypothesis.

**Figure 2: Structural Model with Hipothesis**




## Data Analysis Method

SmartPLS as prediction model does not require particular data distribution to estimate the parameters in predicting causal relationship. We are going to evaluate two model; (1) Measurement Model (2) Structural Model. Measurement model or Outer Model analysis is a model to assess construct validity and instrument reliability. Construct Validity is tested by Convergent Validity (*Average Variance Extracted/ AVE, Communality)* and Discriminant Validity (*AVE-Square, Cross Loading*). Construct Reliability is tested by *Cronbach's alpha, Composite reliability*. Structural model or Inner Model analysis is aim to see the relationship among the constructs, to predict the causal relationships among latent variables. It is done through bootstrapping process, t-test that gives the output parameter path coefficient and T-Statistics parameter and *R-Square.*

## ANALYSIS AND DISCUSSION

### Descriptive Analysis

Descriptive analysis shows the basic characteristic of the data. Table 1 shows the indicators of construct used in this study. There are 4 latent variables, they are dependent

latent variable; Corporate Performance (CP) with reflective indicators (TOBINS'Q, ROA and ROE); independent latent variable; ICE with formative indicators HCE, SCE and CEE; Moderating latent variable; Corporate Governance Mechanism (CGM) with formative indicators BOCEFF, ACEFF, BIG4 and IO; and SIZE (LogSize) as control variable.

**Table 1: Descriptive Statistic**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| TOBINQ | 90 | .0022 | 1.3494 | .335220 | .3300931 |
| ROA | 90 | .0900 | 4.2500 | 1.777333 | 1.0954039 |
| ROE | 90 | -5.0000 | 43.3300 | 16.017799 | 10.5511459 |
| HCE | 90 | -5.7100 | 25.7400 | 7.828667 | 4.4300129 |
| SCE | 90 | -.9700 | 1.1700 | .830667 | .2075204 |
| CEE | 90 | .0300 | .2200 | .116889 | .0387050 |
| IO | 90 | 10.4000 | 99.9600 | 73.960778 | 22.0265306 |
| BOCEFF | 90 | .3300 | .8500 | .613667 | .0946128 |
| ACEFF | 90 | .4000 | .9000 | .598000 | .1203198 |
| BIG4 | 90 | .00 | 1.00 | .6333 | .48459 |
| SIZE | 90 | 9.154 | 11.742 | 10.37271 | .737404 |
| Valid N (listwise) | 90 | | | | |

**Measurement Model (Outer Model Analysis)**

Outer model analysis with Iteration algorithm generate parameter of measurement model. Table 2 below shows the result of construct validity and reliability test by iteration algorithm.

**Table 2: Algorithm Overview**

| | AVE | Composite Reliability | R Square | Cronbachs Alpha | Communality | Redundancy |
|---|---|---|---|---|---|---|
| CGM | | 0.753234 | | | | |
| CP | 0.608786 | 0.687739 | 0.662519 | 0.621823 | 0.5325632 | 0.2581651 |
| ICE | | 0.657431 | 0.442323 | | | 0.1567657 |
| ICE*CGM | | 0.845616 | | | | |
| SIZE | 1.000000 | 1.000000 | | 1.000000 | 1.000000 | |

Validity and reliability testing with iteration algorithm is applicable to the reflective construct. *Convergent validity testing* show that Corporate Governance (CP) has

AVE (0.603) and Communality (0.533). The values are above 0.5 (*Rule of thumb > 0.5*). The discriminant validity that is measured by using AVE Square value 0.786 which is higher than all latent variable correlation value. Thus, It means higher probability the indicators are convergent to the construct, and the construct is defines valid. In addition the result shows *Cronbach's Alpha* (0.622) and *Composite Reliability* 0.688, both are higher than 0.5 (*Rule of thumbs 0.6*) This shows that measurement model has internal consistency and accuracy in measurement.

Next, table 3 below shows the validity and reliability testing for formative construct. It show Outer loading (*bootstrapping*) for the indicators proposed and revised model. Testing result with SmartPLS, noted that two of three indicators of ICE, HCE and SCE have significant T-Statistic. None of 4 indicators of CGM are significant. Meanwhile, all of three indicators of CP are significant. Several indicators of moderating latent variables ICE*CGM also seem insignificant.

**Table 3: Outer Loading – (Default - Revised)**

| | Default | | Revised | |
|---|---|---|---|---|
| | **Original Sample (O)** | **T Statistics (\|O/STERR\|)** | **Original Sample (O)** | **T Statistics (\|O/STERR\|)** |
| aceff -> CGM | 0.476452 | 1.252751 | 0.665132 | 1.665322* |
| boceff ->CGM | 0.436643 | 1.273772 | 0.657333 | 1.983111** |
| hce -> ICE | 0.995344 | 26.153739** | 0.995819 | 26.823739** |
| hce_aceff -> ICE*CGM | 0.791933 | 10.645000** | 0.883232 | 12.546433** |
| hce_boceff -> ICE*CGM | 0.771461 | 11.430484** | 0.799404 | 12.134189** |
| hce_big4 -> ICE*CGM | 0.726199 | 5.824242** | | |
| hce_io -> ICE*CGM | 0.737924 | 10.019888** | 0.764223 | 10.876324** |
| big4 -> CGM | -0.740843 | 1.443924 | | |
| cee -> ICE | 0.252082 | 1.215037 | | |
| cee_aceff -> ICE*CGM | 0.320587 | 1.521807 | | |
| cee_boceff ->ICE*CGM | 0.373745 | 2.004591** | | |
| cee_big4 -> ICE*CGM | 0.623175 | 6.411951** | | |
| cee_io -> ICE*CGM | 0.459132 | 2.574815** | | |
| io -> CGM | 0.363283 | 1.189389 | 0.899324 | 1.998431** |
| roa <- CP | 0.942161 | 47.354993** | 0.942161 | 47.354993** |
| roe <- CP | 0.931623 | 48.415487** | 0.931623 | 48.415487** |
| sce -> ICE | 0.418705 | 2.778572** | 0.786322 | 2.994233** |
| sce_aceff -> ICE*CGM | 0.360067 | 1.511227 | 0.650134 | 2.989431** |
| sce_boceff -> ICE*CGM | 0.409414 | 2.291750** | 0.675321 | 3.456288** |
| sce_big4 -> ICE*CGM | 0.563399 | 4.156014** | | |
| sce_io ->ICE*CGM | 0.461115 | 2.652245** | 0.765229 | 3.342222** |
| size <- SIZE | 1.000000 | | 1.000000 | |
| tobinq <- CP | 0.266024 | 1.663302* | -0.266024 | 1.663302* |

Further analysis indicates there are adjusments that should be made by eliminating the insignificant indicators or choose only indicators with near to significant. The dashed area are critical indicators that should be eliminated. CEE will be eliminated because of the lowest weight indicator of ICE n insignificant. BIG4 the lowest weight indicator of CGM and insignificant. The remaining are default indicators of moderating effects (ICE*CGM) that come to be eliminated as the source indicators be eliminated.

After eliminating the insignificant indicators, and considering only significant, or near to significant indicators, it can be seen that all remaining indicators of laten variable of ICE, CGM, ICE*CGM, and, CP have weight values above 0.50 and met the recommended criteria.

**Structural Model (Inner Model Analysis) - Hypothesis Testing**

The causal relationships among latent variables are processed by bootstrapping that gives the result of path coefficient and T-Statistics parameter. Table 6 below present estimated structural model testing Default and Revised, and corresponding hypotheses conclusion. In addition to Structural model testing, the following Figure 3 present estimated structural model for proposed and revised model by SmartPLS.

**Table 4: Path Coefficient, Total Effect (*Bootstraping)* (Default-Revised)**

| | | Default | | Revised | | Conclusion |
|---|---|---|---|---|---|---|
| Hypotheses | Path | Original Sample (O) | T-statistic | Original Sample (O) | T-statistic | |
| H1 | ICE -> CP | 0.483653 | 3.957743** | 0.554345 | 4.235643** | Positive, Significant |
| H2 | CGM -> ICE | 0.261181 | 1.197434 | 0.274234 | 1.786345* | Positive, Significant |
| H3 | CGM -> CP | 0.225386 | 1.508705 | 0.356453 | 1.6881441* | Positive, Significant |
| H4 | ICE*CGM->CP | 0.226880 | 0.212430 | 0.487723 | 1.6565212* | Positive, Significant |
| | SIZE -> CP | 0.461339 | 7.335910** | 0.566542 | 8.765854** | Positive, Significant |

*Note: *Significant at p<0.10 (1.64); **Significant at p<0.05 (1.96); one-tail*

From path analysis (fig 3 and 4), it is apparent that there is an improvement of influential value of ICE, CGM, as well as moderating influence ICE*CGM and control variable SIZE to Corporate Performance. As in table 2 R-Square value for ICE; 0.442 and CP; 0.663, It reflect that CG Mechanism are able to explain IC Efficiency 44.2 percent, and Corporate Performance is able to be explained by variable of CGM, ICE, ICE*CGM and SIZE. This revised model can be used to address the proposed hypothesis.

**Figure 3: Structural Model (Defaul)**

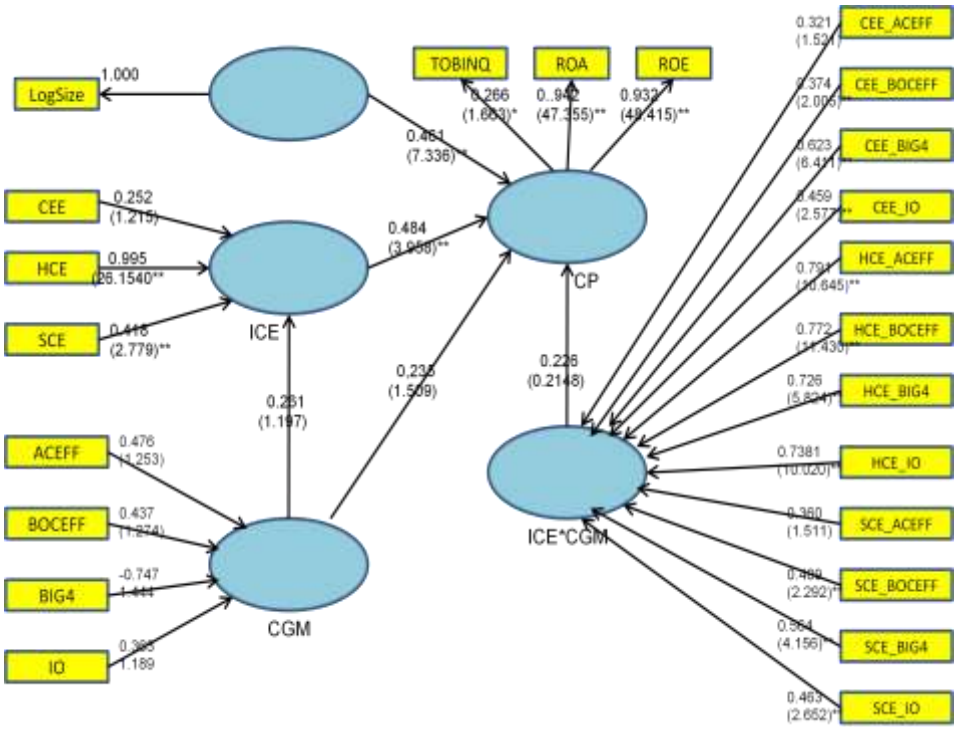
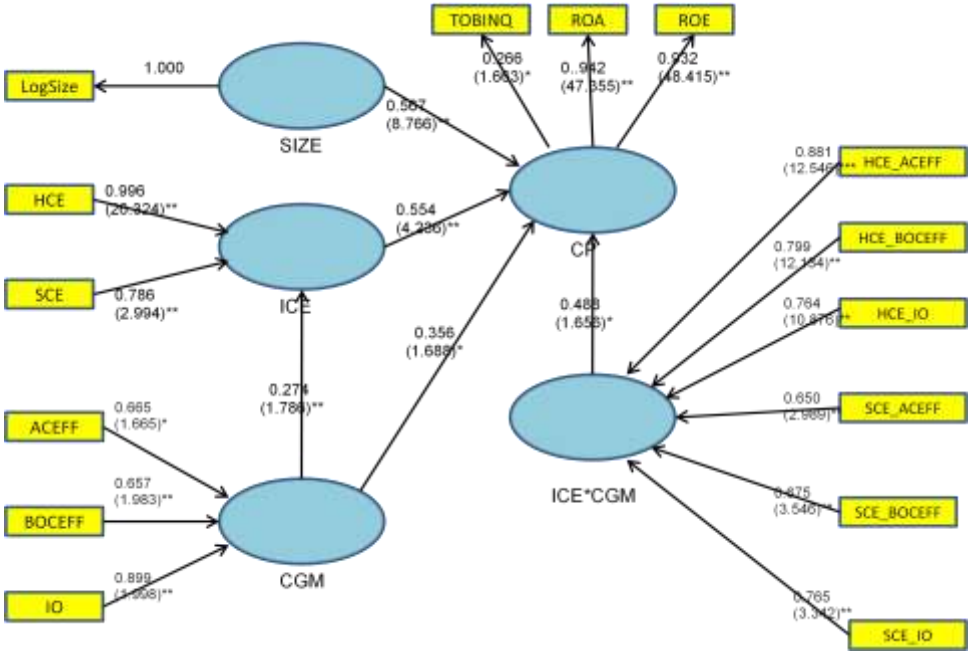



**Figure 4: Structural Model (Revised)**




*Note: *Significant at p<0.10 (1.64); **Significant at p<0.05 (1.96); one-tail.*

The first hypothesis (H1) proposed there is a positive influence of IC Efficiency (ICE) toward Company Performance (CP). The revised output shows positive path coefficient (0.554) between ICE and CP, with T-Statistics 4.236**which is above 1.96. It means, the weight loading significant at p <0.05 (one-tail) and indicates that there is positive influence of ICE toward CP. Therefore it means that H1 is accepted. This findings support related study in Indonesia (Ummu, 2008), Appuhami (2005) in Thailand and Mavridis (2003) in Japan. The dominant indicator of ICE are HCE and SCE. This study also support to Firer and Williams (2003) for the case of a public company in South Africa, that not all components ICE/VAIC$^{TM}$ have significant influence on the corporate performance.

The second hypothesis (H2) proposed there is positive influence of CG Mechanisms toward IC Efficiency. The revised output shows positive path coefficient (0.274) between CGM and (ICE), with T-Statistics 1.786*which is above 1.64. It means it's weight loading significant at p <0.10 (one-tailed) and indicates that there is positive influence of CGM toward ICE. Therefore it means that H2 is accepted. The dominant indicators for CGM are BOCEFF, ACEFF and IO. Part of the result supported to (Daryee et.al., 2011 ) for the case of Tehran Stock Exchange that there is positive correlation CG structure and IC and Corporate value

The third hypothesis (H3) proposed there is positive influence of CG Mechanisms toward Corporate Performance (CP). The revised output shows positive path coefficient (0.356) between CGM and CP, with T-Statistics 1.688* which is above 1.64. It means it's weight loading significant at p <0.05 (one-tailed) and indicates that there is positive influence of CGM toward CP, in addition H3 is accepted. This result support to (Herawati, 2008) for case of Indonesian Stock Exchange (IDX) there is positive influence of CG structure toward company performance.

With regard to the fourth hypothesis (H4), proposed that the CG Mechanisms moderate the influence of ICE toward CP. The revised output shows positive path coefficient (0.488) between ICE*CGM and CP, with T-Statistics 1.656* which is above 1.64. It means it's weight loading significant at p <0.10 (one-tailed) and indicates that CGM moderates the relationship of ICE toward CP. Therefore it means that H4 is accepted. The revised output also show that Size of the company have positive and significantly influence the company performance.

## CONCLUSION AND RECOMMENDATION

### Conclusion

Based on the statistical results, it is safe to conclude that;

Intellectual capital efficiency positively influences corporate performance in Indonesian Banking companies listed in IDX. Efficiency in human capital and structural capital prevail as dominant indicators of intellectual capital that influence corporate performance. The better a company's resources (human capital and structural capital) have been utilized, the higher the company's value creation efficiency will be. The findings confirm that human capital, and structural capital as the decisive value creation factors in Indonesian banking industry, whereby the increasing of value added on the one hand will determine the market value on the other hand.

Corporate Governance Mechanisms positively influence the Intellectual Capital efficiency. CG Internal mechanisms such as Board of commissioner, Audit committee and Institutional ownership dominantly influence IC efficiency. This shows that the aspect of effective monitoring such as independency, activity, size of member, expertise, competence and ownership structure influence intellectual capital efficiency.

Corporate governance mechanisms positively influence corporate performance. CG Internal mechanism Board of commissioner, Audit committee and Institutional ownership dominantly influence corporate performance in aspect of market (Tobin'sQ), ROA, ROE. This study shows that the aspect of effective monitoring such as independency, activity, size of member, expertise, competence and ownership structure influence to corporate market performance.

Corporate Governance Mechanisms moderate the relationship of Intellectual Capital efficiency toward Corporate Performance. This study shows that with the aspect of independency, activity, size of member, expertise, competence and ownership structure, CG mechanisms play the role of monitoring in value creation path (vision, strategy and leadership). The result will strengthen the influence of intellectual capital efficiency to corporate performance.

**Recommendation**

One of the impact of globalization on Indonesian banking industry is the push toward acknowledgement on intellectual capital. Management should be able to adapt themselves in response to global competition. Forward thinking management must ensure that intangible assets could be managed, identified, monitored, developed and empowered. Human capital and structural capital are dominant indicators influencing corporate performance. Banking company should focus on learning and growth as well as internal business process. Effective monitoring in decision making and policy making related to human capital and structural capital investment will gain advantage of value creation for future benefit.

This study is far from perfect. Future study can certainly use more data, by simply covering more financial years, expanding the scope of analysis into other industrial categories at IDX, Utilizing more variables, including macro economic data, may also be considered to seek out the relationships, and obtain the bird's eye view into the industry. An emphasis into smaller firms and/or younger organizations may also be attempted in the future to note the potential differences. Nonetheless, this study is able to provide a snapshot of what had happened in the Indonesian banking industry.

**REFERENCES**

Abdolmohammadi, M.J. 2005. "Intellectual capital disclosure and market capitalization". *Journal of Intellectual Capital.* Vol. 6 No. 3. pp. 397-416.

Appuhami, B.A.R., 2007"The impact of intellectual capital on investors' capital gains on shares: An Empirical investigation of Thai banking, finance & insurance sector", *International Management Review*, 3(2), 14-25.

Brennan, N., (2000). "Intellectual capital: Current Issue and Policy Implication", *Journal of Intellectual Capital*, Vol.1, No.3.pp206-240.

Chen,M., 2005, "An empirical investigation of the relationship between intellectual capital and firm's market value and financial performance", *Journal of Intellectual Capital*, 6(2), 159-176.

Chang, S., 2007, "Valuing Intellectual capital and Firm's Performance: Modifying Value Added Intellectual Coefficient (VAIC) in Taiwan IT Industry", *Ageno School of Business, Golden Gate University*, August.

Edvinsson, L. and M. Malone. 1997. *Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower.* Harper Collins, New York, NY.

Firer, S., and S.M. Williams. 2003. "Intellectual capital and traditional measures of corporate performance". *Journal of Intellectual Capital.* Vol. 4 No. 3. pp. 348-360.

Ghozali, I. 2006. *Structural Equation Medeling; Metode Alternatif dengan PLS*. Badan Penerbit Undip. Semarang.

Goh, P.C., and K.P. Lim. 2004. "Disclosing intellectual capital in company annual reports; Evidence from Malaysia". *Journal of Intellectual Capital* Vol. 5 No. 3. pp. 500-510.

Guthrie, J., and L.D. Parker. 1989. "Corporate social reporting: a rebuttal of legitimacy theory". *Accounting and Business Research*. Vol. 19 No. 76. pp. 343-52.

Kamath, G.B., 2007,"The intellectual capital performance of Indian banking sector", *Journal of Intellectual Capital*, 8 (1), 96-123.

Mavridis, D.G. 2004. "The intellectual capital performance of the Japanese banking sector", *Journal of Intellectual Capital.* Vol. 5 No. 3. pp. 92-115.

Meek, G.K., and S.J. Gray. 1988. "The value added statement: an innovation for the US companies". *Accounting Horizons.* Vol. 12 No. 2. pp. 73-81.

Petty, P. and J. Guthrie. 2000. "Intellectual capital literature review: measurement, reporting and management", *Journal of Intellectual Capital.* Vol. 1 No. 2. pp. 155-75.

Gutrie, J., (2001), "The Management, Measurement and Reporting of Intellectual Capital", *Journal of Intellectual Capital*, Vol.2.p.27.

Pulic, A. 1998. "Measuring the performance of intellectual potential in knowledge economy". *Paper presented at the 2nd McMaster Word Congress on Measuring and Managing Intellectual Capital by the Austrian Team for Intellectual Potential*.

Riahi-Belkaoui, A. 2003. "Intellectual capital and firm performance of US multinational firms: a study of the resource-based and stakeholder views". *Journal of Intellectual Capital.* Vol. 4 No. 2. pp. 215-226.

Stewart, T.A., 1997, "*Intellectual Capital: The new wealth of organizations*", Doubleday/Currency, NewYork, NY.

Sveiby, K.E. 2001. "Method for measuring intangible assets". available online at: www.sveiby.com/articles (accessed December 2012).

Ulum., (2009), "Intellectual Capital dan Kinerja Keuangan Perusahaan, Suatu Analisis dengan pendekatan PLS", *Paper presented at Simposium Nasional Akuntansi SNA 11 Pontianak Indonesia*.