



# Influence of Intellectual Capital on Financial Performance in the Banking Sector in Indonesia

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## Authors' contributions

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## ABSTRACT

The aim of this research is to examine the influence of intellectual capital on the financial performance of banking companies which is moderated by good corporate governance. The method used in this research is multiple linear regression analysis with moderating variables using Moderated Regression Analysis (MRA). The population in this study was 45 banking companies. The banking sector is one of the sectors that bridges between people who have excess funds and people who need funds. Not only is the company's financial performance a reference for the company's success, but company resources can also provide increased financial performance for the company's sustainability. Intellectual capital is one of the factors that influences bank performance. The research results show that Intellectual Capital has a positive effect on financial performance and Good Corporate Governance. However, Good Corporate Governance does not moderate the relationship between Intellectual Capital and financial performance. These findings underscore the importance of Intellectual Capital in improving financial performance and Good Corporate Governance practices, but do not support the moderating role of Good Corporate Governance in this relationship.

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## 1. INTRODUCTION

In today's era of globalization, improving the quality of life of the people in Indonesia is a goal in the development program. Improved quality of life can be achieved by increased income through economic activities. The banking sector plays a strategic role in economic activity [1]. The banking sector is one of those sectors that bridges between a society that has an excess of funds and a community that needs funds [2]. Basically, trust in the relationship between the public and the bank is essential, with the trust of the public it will make the bank more superior [3].

“The current rate of banking development is affected by the new outbreak of the Covid-19 virus that hit the world including the world economy at the end of 2019” [4]. Corona Virus Disease 2019 (COVID-19) is a virus that has caused the worldwide pandemic of covid-19. The rapid spread of the virus has spread to almost every country in the world, including Indonesia. A global pandemic was defined by the World Health Organization (WHO) in March 2020. Its rapid spread and the number of exposed cases is increasing every day, as Covid-19 Indonesia has the highest mortality rate in ASEAN [5,5a-5d].

“The rise of Covid-19 has shaken the company's financial performance. The financial performance of some companies during many pandemic times has been shrinking quite significantly. The decline in the company's revenue is due to the PSBB (Great Scale Social Restrictions) policy issued by the government to reduce the activities of the public who are scanning on the closure of some business sectors. According to Samsul Hidayat, Executive Director of the Indonesian Issuers Association (2020) that the cessation of operational activities of some business sectors as a result of the PSBB caused a fairly significant decline in revenue in some issuers. One of them is in the financial sector, in the banking company. BUMN companies like Bank BRI and Bank Mandiri both experienced a net profit decline of 45.78% and 37.71% in 2020 compared to before the pandemic in 2019” [6].

The government has adopted an economic policy in the banking sector regarding the stimulus of the national economy, namely the National Economic Stimulus Policy of POJK No.11/POJK.03/2020 issued by the government

through the Financial Services Authority [7]. The national economic stimulus is carried out by raising and distributing public funds to boost growth and protect economic stability during the Covid-19 pandemic, so that the country's economy remains stable. This pandemic is a challenge for the banking financial sector because at this time banking plays an important role in supporting and developing the national economy in facilitating the economy in financial transactions [8].

According to [9]. Banking is claimed to have a good performance as well as its role as a media/intermediate institution, because in this way the bank gets “trust” from the public [1]. However, not only is the financial performance of a company the benchmark in the success of the company's resources can also provide an improvement in financial performance from year to year to guarantee the corporate sustainability. The performance of banks is at the center of public and national attention, because banking can help national development in economic development, advance national justice and stability, and increase the well-being of the people. The financial performance of a company is the result of the use of resources. The existence and performance of a company is created by the corporate assets and especially the intangible assets that are human resources (HRMs) that manage and dispose of those assets. Intellectual capital is one of the factors that influence bank performance [8].

Concept Intellectual Capital (IC) introduced by [10]. “International Federation of Accountants – IFAC (1998) classifies IC into three categories, namely Organizational Capital, Relational Capital, and Human Capital. Organizational Capital includes intellectual property dan infrastructure assets. Meanwhile, in Indonesia, the IC phenomenon began to develop especially after the emergence of PSAK No.19 (revision 2000) on intangible assets. Although not explicitly printed as an IC, more or less the IC has received attention” [11]. “Intellectual capital are inherent resources of information and knowledge that serve to enhance competitiveness and improve the performance of a company” [12]. According by [13], “intellectual capital plays an important role in improving financial performance”. “Effective and efficient physical capital management is part of the use of corporate intellectual capital” [14]. “Companies

need to improve their intellectual capital performance so that it will have a positive impact on their financial performance” [15].

“In achieving good corporate performance, companies must be sure to have implemented the concept of Good Corporate Governance in their business” [16]. According by Yuliansyah et al. [17], “The implementation of the concept of good corporate governance can solve the problems that arise between the management of the company and the shareholders so that the trust given by the shareholder is based on the outcome of good management”.

“The Indonesian Institute for Corporate Governance (IICG) It defines corporate governance as a set of mechanisms that direct and control a company so that its operations go according to the expectations of its stakeholders. (stakeholder)” [18]. “The Indonesian Institute for Corporate Directorship (IICD) is an independent institution in Indonesia established to be a strategic partner in building good corporate governance by promoting ethical corporate behaviour and enhancing the skills, knowledge, and ability of corporate directors and councils. The important role of IICD is the internalization of good corporate governance practices in which IICG has consistently assessed the application of Good Corporate Governance (GCG) to public companies in Indonesia. Earlier studies in Indonesia have used the CGPI (Corporate Government Perception Index) scores issued by the Indonesian Institute of Corporate Government (IICG) as a measure of the quality of corporate government” [19].

## **2. LITERATURE REVIEW**

“Intellectual capital is intellectual property centered on human resources that functions to increase the competitiveness of the company” [20]. “Based on Resources Based Theory, it can be concluded that intellectual capital meets the criteria as a unique resource that can create a company's competitive advantage and can be used to develop and implement strategies so as to improve company performance for the better” [20]. “This means that IC plays a very important role in improving company performance” [21,22].

Research conducted by Mawarsih [23], Pratama et al. [24], Tarigan & Septiani [25], and Wijayani [20] found “empirical evidence that intellectual capital has a positive effect on financial performance. This shows that the effective and

efficient use of intellectual capital makes the company achieve higher performance”.

### **H1 = Intellectual capital has a positive effect on financial performance**

“The application of good corporate governance principles can improve the financial performance of a company through monitoring, and the existence of good corporate governance is currently not only an obligation for every company but has become a necessity that bridges the relationship between investors and company management” [26]. Agency theory proposed by Jensen & Meckling [27] concerns “the contractual relationship between members in a company. Historically, the separation of ownership and management has been an important basis for corporate governance”.

Research conducted by Al-ahdal et al. [28], Bhagat & Bolton [29], Cynthia & Devie [26], Nurcahyani [30], and Paniagua et al. [31] produces “empirical evidence that corporate governance has a positive effect on financial performance”. Nurcahyani [30] states that “an effective corporate governance system in a company will make management not abuse authority and work in the interests of the company”.

### **H2 = Corporate governance has a positive effect on financial performance**

Agency theory is closely related to the corporate governance system [32]. Strong banking with a high level of financial performance, apart from being influenced by strong capital, is also influenced by appropriate institutions based on Good Corporate Governance (GCG). Good Corporate Governance (GCG) is a system created in order to foster performance, oversee the interests of stakeholders and foster compliance with applicable laws and ethical values [33]. The implementation of GCG is one of the efforts made by company management to improve the company's financial performance [34].

Managers who are also shareholders and managers who are not shareholders will of course have different motivations. Therefore, each manager is required to make innovations and new ideas for the continuity of a company. The existence of an innovation, knowledge, and experience possessed by a manager can be categorized in intellectual capital in the form of

human capital. The better the performance of a manager in determining policies and also in terms of decision making, it will affect the development of the company [35]. Based on the research and analysis above, the following hypothesis can be proposed:

**H3: GCG can moderate the relationship between intellectual capital and financial performance.**

### 2.1 Methods

The method in this study uses quantitative methods. Quantitative research is an analysis that computes numbers in order to examine the data acquired, using statistical formulas that are tailored to the subject of the research and the formulation of the problem. It is possible to carry out this quantitative study manually or using computer statistical tools like the SPSS application [36]. Total population in this study of 45 companies. The research objects of this study are intellectual capital, financial performance and good corporate governance. This research was conducted on banking companies in Indonesia that are listed on the Indonesian Stock Exchange. Purposive sampling is the method used to obtain a representative sample according to certain criteria.

The method used in this research is multiple linear regression analysis with moderating variables using Moderated Regression Analysis (MRA). Moderated Regression Analysis (MRA) or interaction test is a special application of

double linear regression where in the equation the regression contains elements of interaction.

## 3. RESULTS AND DISCUSSION

### 3.1 Results

Testing the moderation effect of good corporate governance as a moderation variable on the influence of intellectual capital on financial performance, uses the Hierarchical Regression Analysis method. This method uses two equations. The first equation is used to see the main effect of the influence of the independent variable (intellectual capital) on the dependent variable. This analysis was processed with SPSS 21.0. The results obtained are as follows:

#### Hypothesis Test Results:

a. Uji t

The partial test (t test) is used to test whether there is no influence of independent variables on partially dependent variables. The regression test is performed using the t test at a 95% degree of certainty or  $\alpha = 5\%$  with the following conditions:

- a. If the significance level is less than 5% (0.05), then it can be concluded that H0 is rejected and Ha is accepted.
- b. If the significance level is greater than 5% (0.05), then it can be concluded that H0 is accepted and Ha rejected.

The results of the t test on this study can be seen in Table 3 as follows:

**Table 1. Regression model I result**

Unstandardized Coefficients			Standardized Coefficient			
Model	B	Std. Error	Beta	T	Sig	
1	(constant)	3.607	.174		20.679	.000
	IC	-.446	.063	-.442	-7.074	.000
	IC*ROA	.143	.009	.009	16.664	.000

**Table 2. Regression model II result**

Unstandardized Coefficients			Standardized Coefficient			
Model	B	Std. Error	Beta	T	Sig	
1	(constant)	-2.441	2.405		-1.015	.311
	IC	1.264	.561	1.252	2.252	.025
	GCG	1.272	.551	1.292	2.310	.021
	IC*GCG	-.222	.128	-1.566	-1.730	.085

**Table 3. T Test result**

Variable	B	T	Sig.	Result
IC	0.404	12.023	0.000	Sign
IC*ROA	0.143	16.664	0.000	Sign
IC*GCG	-0.222	-1.566	0.085	InSign

### 3.2 Discussion

#### 1. The influence of intellectual capital on financial performance

Based on the test results in Table 3, the regression coefficient value is 0.404 and the t-count value is 12.023 with a significance value of 0.000. The significance value is smaller than the predetermined error tolerance ( $0.000 < 0.05$ ). This shows that intellectual capital has a positive and significant effect on financial performance, so the first hypothesis is accepted. This research is in line with research from [22] this researcher found that IC has a positive influence on company performance. This research develops the Value Added Intellectual Coefficient (VAIC) method which measures the efficiency of added value created by IC in a company.

#### 2. The influence of intellectual capital on Good Corporate Governance

Based on the test results in Table 3, the regression coefficient value is 0.143 and the t-count value is 16.664 with a significance value of 0.000. The significance value is smaller than the predetermined error tolerance ( $0.000 < 0.05$ ). This shows that intellectual capital has a positive and significant effect on Good Corporate Governance, so the first hypothesis is accepted. This research is in line with [37] where this research finds that IC has a positive effect on GCG in companies in Australia, consistent with the finding that IC improves GCG practices.

#### 3. Good Corporate Governance (GCG) moderates the relationship between intellectual capital and financial performance

Based on the test results in Table 3, the regression coefficient value is -0.222 and the t-count value is -1.566 with a significance value of 0.085. The significance value is greater than the predetermined error tolerance ( $0.000 < 0.05$ ). This shows that Good Corporate Governance does not moderate the positive and significant effect of intellectual capital on financial performance, so the first hypothesis is rejected.

This research is in line with research from [38] they found that GCG does not always moderate the relationship between IC and financial performance in Taiwan's high-tech industry, supporting the results that GCG does not moderate this relationship.

### 4. CONCLUSION

Conclusions of the research can be structured as follows:

1. Intellectual Capital has a positive influence on financial performance. This research shows that Intellectual Capital has a positive influence on the company's financial performance. This means that the higher the Intellectual Capital a company has, the better the financial performance that can be achieved.
2. Intellectual Capital has a positive effect on Good Corporate Governance. The research results also show that Intellectual Capital has a positive effect on Good Corporate Governance. In other words, companies with higher Intellectual Capital tend to have better Good Corporate Governance practices.
3. Good Corporate Governance (GCG) does not moderate the relationship between intellectual capital and financial performance. Although Good Corporate Governance is predicted to moderate the relationship between Intellectual Capital and financial performance, this research finds that Good Corporate Governance does not moderate this relationship. This means that, although Good Corporate Governance is important, its existence does not strengthen or weaken the influence of Intellectual Capital on a company's financial performance.

Overall, this research underlines the importance of Intellectual Capital in improving financial performance and Good Corporate Governance practices, but shows that Good Corporate Governance does not play a moderating role in the relationship between Intellectual Capital and financial performance.

## 5. RECOMMENDATIONS

1. Increase Investment in Intellectual Capital: Companies should focus more on increasing investment in Intellectual Capital (IC), such as human resource development, innovation and information technology. Strong IC has been proven to improve a company's financial performance.
2. Strengthening Good Corporate Governance Practices: Although Good Corporate Governance (GCG) did not moderate the relationship between IC and financial performance in this study, good GCG practices remain important for transparency, accountability and corporate sustainability. Companies must continue to strengthen GCG practices to maintain stakeholder trust.
3. Integration of IC and GCG in Corporate Strategy: Companies must integrate IC management and GCG practices in their business strategy. Effective IC management and good GCG implementation can go hand in hand to achieve optimal performance and ensure compliance with regulations.
4. Employee Training and Development: Investing in employee training and development is one of the main ways to improve IC. Companies must provide ongoing training programs to improve employee skills and knowledge.
5. Research and Innovation: Companies must continue to encourage research and innovation to create new products and services that can increase the company's added value. Focusing on innovation can strengthen IC and increase competitiveness in the market.
6. Periodic Monitoring and Evaluation: Carrying out regular monitoring and evaluation of IC and GCG practices is very important. This helps companies to continuously adapt their strategies based on changes in the business environment and achieved performance.
7. Further Studies: Further studies are needed to explore other factors that may moderate the relationship between IC and financial performance. More in-depth research can provide additional insight into how companies can utilize IC and GCG more effectively.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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