



The Effect of Intellectual Capital on Price to Book Value with Good Corporate Governance as a Moderating Variable

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Abstract

Purpose: The purpose of this research is to determine the effect of intellectual capital on price to book value (PBV) and moderation form of good corporate governance (GCG) in relation of intellectual capital on PBV.

Methodology: This research used quantitative approach that uses data from companies incorporated in the Indonesia Stock Exchange (IDX) and companies assessed by Indonesian Institute for Corporate Directorship (IICD) during the 2016-2018 period. The sampling method was purposive sampling method and obtained 53 companies with 159 observations in total. The analysis technique of this research is moderated regression analysis (MRA) using Statistical Package for Social Science (SPSS).

Findings: The results show that intellectual capital has a positive significant effect on PBV, and also shows that the higher GCG, the relation of intellectual capital on PBV will be more positive.

Practical implications: Companies can increase the use of intellectual capital followed by the implementation of good GCG principles in order to increase investors' perceptions of the company's future prospects as reflected in the PBV ratio. Investors who wish to invest in a company can pay attention to the company's ability to utilize intellectual capital in an effort to increase added value for the company and implement good GCG.

Significance of the study: This research contributes to the financial accounting research by expanding the knowledge on the price to book ratio and financial performance of capital market companies especially in managing the company resources.

1. Introduction

Price to book value (PBV) is an investor's perspective of the company's future prospects. Although PBV is an investor's perspective, there are still many large capital companies that have very different PBV values, even though they have large capitalization. The company has not been able to improve investors' perceptions of the future prospects of their company only by having large capital. Companies must be able to maximize all their resources so that they can compete fairly with other companies, so that they can produce competitive advantages that can be generated through intellectual capital management (Mudilar, 2016). However, negligence in exploiting intellectual advantage can cause irreparable damage to capital market perceptions, since intellectual capital develop the economic condition in these companies. In fact, a lot of scientists believe that the underdevelopment in certain firms is caused by a lack of intellectual capital utilization to be used in operational activities but not because of insufficient capital resources (Sales, et al, 2016).

Several studies on intellectual capital in PBV have been carried out, one of which is research conducted by Awaliyah & Safriliana (2016) which found that intellectual capital affect PBV positively. Intellectual capital that is utilized efficiently will increase company value. By knowing PBV, investors can provide a direct picture of a firm. Therefore, when intellectual capital is maximally utilized it can improve the firm's performance, and with the excellent performance the investors are willing to invest on the firm, so that the value of a firm is high. Juwita & Angela (2016) and Ozer & Çam (2016) also found the same results by using the proxy value added intellectual coefficient (VAIC) as an instrument for measuring intellectual capital. Sardo & Serrasqueiro (2017) reveal that intellectual capital is a substantial resource in creating corporate value. It is being said that human capital is a substantial factor in company wealth. The results of these result shows that intellectual capital efficient utilization positively affect the firm's financial performance. The impact of the intellectual capital component on a company's PBV can occur indirectly. However, research conducted by Suryarahman (2018) found that human capital is not a determinant of corporate value creation. Market will respond to a company based on

physical resources, which also states that investors tends not to focus on intellectual resources, in this case the human capital owned by the company.

Differ to previous studies, Celenza & Rossi (2014) found that the observational analysis showed no statistically significant effect, in other words, PBV was not influenced by intellectual capital. In addition, Mustafa, et al (2015) and Li & Zhao (2018) also found that intellectual capital is not a key determinant of corporate excellence. In other words, intellectual capital has no effect on PBV. The difference in results in previous studies can be caused by the presence of contingent factors which illustrate that there are other factors involved in the influence of intellectual capital on PBV.

Managers who seek to re-energize the company value should invest in the capability development program of the organization's existing resources. This will lead to increased intellectual excellence, which in turn will increase innovation in products and processes (Smriti & Das, 2018). Intellectual capital owned by the company can be used as a company advantage, however companies need good corporate governance in order to take advantage of the advantages they have in order to produce maximum company performance with this intellectual capital. Companies that are complying the good corporate governance (GCG) principles might accelerate the performance and competitiveness, so the company will have a clear path to achieve business excellence. GCG can be considered as a factor that can influence the use of intellectual capital in increasing PBV (Aswathy & Chandramohan, 2018). GCG is a principle of corporate governance by utilizing human resources as a driving force for GCG implementation. This principle can also serve as a protective tool for investors that ensures that the company has carried out its activities in a controlled and maximum manner. If a company has high intellectual capital with good GCG implementation, then the company's performance will be maximized, so that it will provide a reflection to investors that the company's future prospects are good and ultimately increase the company's PBV. This can be explained through resource-based theory, which describes the use of company resources will provide a competitive advantage. In this case, the intellectual capital that followed by the implementation of GCG principles will lead to the maximum competitive advantage. Which

in turn will increase investors' perceptions of future prospects company. A strong GCG will be responded positively by the market as reflected by the stock price (Ahulu & MacCarthy, 2020).

Yuliyanti (2019) found that GCG has a positive effect on PBV which concludes that in this modern era, investors are now starting to assess the implementation of GCG in companies because this shows the company's commitment to running a company with good governance. In addition, Worokinasih & Zaini (2020) found that GCG has a positive effect on PBV, which indicates that companies with good GCG are able to produce an increase in PBV, which means that the company is also able to generate good future prospects.

2. Literature review and hypothesis development

2.1 Literature review

2.1.1 Resource based theory

Resource based theory defines the optimal performance of the company when the company use their resources optimally, so that it can create a competitive advantage (Wenferfelt, 1984). Competitive advantage is inherited in the company and it is hard to imitate by other companies. The company can obtain the competitive advantage if the resources is utilized and managed properly. In the company's resources, resource-based theory believes that the company is a collection of capabilities in managing these resources (Penrose, 1959). Resources mean anything that can be considered as an advantages or disadvantages of a company. According to Wernerfelt (1984) company resources can be defined as assets that is tangible and intangible which is bound to the company.

2.2 Hypothesis development

2.2.1 The Influence of Intellectual Capital on Price to Book Value

Companies must be able to maximize all their resources in order to compete fairly with other companies (Mudilar, 2016). Capital is an important instrument for building, developing, and maintaining a company, so that it is used as an instrument to anticipate the risk of company loss and a tool for business expansion (Sharma, 2018). In order to

continue to survive, a company must have a high level of competitive advantage. One of the ways to achieve this competitive advantage is the management of intellectual capital.

According to the resources-based theory concept, an ability to manage assets is needed by a company, both physical assets and intellectual assets in order to compete with other companies, (Putra, 2015). Intellectual capital is a form of the company's capability to utilize the resources, which is the capital employed. With proper management the company is believed to be able to maximize the performance, and the market perceptions of the company's prospects in the future will increase as reflected in the PBV value. Companies that are able to manage company assets maximally will be able to create value added and have an effect on increasing the company's value (Handayani, 2015).

Companies with a higher level of intellectual capital will show a higher market value. This means that intellectual capital is a substantial resource to generate the competitive advantage and contributing to the company's market value (Nimtrakoon, 2015). According to the research by Simanungkalit & Prasetyono (2015), Ozer & Çam (2016), Nurhayati (2017), Sardo & Serrasqueiro (2017), and Suryarahman (2018), it shows that intellectual capital affects PBV positively. According to the explanation above and previous research, the hypothesis proposed in this study is as follows.

H₁: Intellectual capital has a positive effect on the Price to Book Value ratio.

2.2.2 Moderating Form of Good Corporate Governance in the Influence of Intellectual Capital on Price to Book Value

Good corporate governance (GCG) is a principle of corporate governance by utilizing human resources as a driving force for GCG implementation. This principle can also serve as a protective tool for investors that ensures that the company has carried out its activities in a controlled and maximum manner. The good corporate governance (GCG) implementation will accelerate the performance and competitiveness of the company so that it leads a clear path to achieving business excellence, so that GCG can be considered as a factor that can influence the use of intellectual capital in increasing PBV (Aswathy & Chandramohan, 2018).

Corporate governance is increasingly recognized as a key element in attracting investment and enhancing business performance and company competitiveness (Achim, et al, 2016). Improved corporate governance increases the investor confidence and affect the stock valuation positively. A good governance tends to value the company higher (Rani, et al 2016). This is supported by research conducted by Ariasna (2015), and Ferial, et al (2016) which resulted that GCG affects the PBV positively, this indicates that companies with good governance are able to produce a significant increase in PBV. that the company is also capable of generating good future prospects. With a good level of GCG implementation, investors will also believe in the company's performance because with good governance, the company is able to use its resources to produce maximum performance.

In the view of resource-based theory, corporate governance mechanisms can be categorized as corporate resources (Wenferfelt, 1984). Resource-based theory defines that the maximum utilization of company resources can produce a prolonged competitive advantage, but these resources require good management (James & Corina, 2015). High intellectual capital certainly requires good corporate governance so that its resources can be maximally utilized. GCG can be considered as a factor that can influence the use of intellectual capital in increasing PBV (Achim, et al, 2016). Intellectual capital owned by the company can be used as a company advantage, however companies need good corporate governance in order to take advantage of the advantages they have in order to produce maximum company performance with this intellectual capital. Research conducted by Ariasna (2015), Ferial, et al (2016), Yuliyanti (2019), and Worokinasih & Zaini (2020) found that GCG has a positive effect on PBV, which indicates that companies with good GCG able to produce an increase in PBV which means that the company is also able to generate good future prospects. According to the explanation above and previous research, the hypothesis proposed in this study is as follows.

H₂: High Good Corporate Governance causes the influence of Intellectual Capital to the Price to Book Value to be more positive

3. Research Methods

3.1 Data types and Sources

This research will be carried out within the Indonesia Stock Exchange (IDX) by accessing the www.idx.co.id page. The research time is 2020, and the observation period is 2016-2018. The research data is in the form of a secondary data obtained from the financial reports of companies incorporated in the IDX for 2016-2018, and the ASEAN Corporate Governance Scorecard (ACGS) assessed by Indonesian Institute for Corporate Directorship (IICD) for the 2016-2018 period.

3.2 Sampling Method and Selection

The sampling method in this study uses purposive sampling technique. The criteria used to select samples in this study are as follows:

Table 1: Sample Selection

No.	Identifications	Total
1.	Companies that are being assessed by IICD during the period 2016-2018	116
2.	Companies that are not consecutively assessed in ACGS during the period 2016-2018	(49)
3.	Companies that suffered losses during the 2016-2018 period	(12)
4.	Companies that have outliers or extreme data	(2)
Companies selected as sample		53
Total sample for the period of 2016-2018		159

3.3 Variable Measurement

The variables used in this research are intellectual capital as an independent variable measured by the Value-Added Intellectual Coefficient (VAIC™) developed by Pulic (2000), good corporate governance as a moderating variable measured using the ASEAN corporate governance scorecard (ACGS) and price to book value as the dependent variable.

Table 2: Variable Measurements

Variable	Source	Indicator
Intellectual Capital (IC)	Pulic (2000)	Value Added Intellectual Coefficient (VAIC™)
Good Corporate Governance (GCG)	IICD	ASEAN Corporate Governance Scorecard (ACGS)
Price to Book Value (PBV)	IDX	$PBV = \frac{\text{Price per Share}}{\text{Book Value per Share}}$

3.4 Method of Data Analysis

The approach used in this research is quantitative, namely an approach that assesses an activity expressed in numbers. The research method used by researchers is the associative method. The use of this method is to analyze the influence caused by one of the variables on the other variables which structurally and accurately analyzed regarding the facts and documents related to the research. The data analysis tool utilized in this research was moderated regression analysis (MRA) using the Statistical Package for Social Science (SPSS) Version 25. The equation of MRA described as follows:

$$Y = a + b_1 IC + b_2 GCG + b_3 IC * GCG + e \quad (1)$$

Where:

Y = PBV

IC = Intellectual Capital

GCG = Good Corporate Governance

IC * GCG = Interaction between Intellectual Capital and Good Corporate Governance

b1, b2, b3 = Beta coefficient

a = Constant

e = Error

4. Results and Discussion

According to the results of sample selection, the companies filtered as samples of this research were 53 companies. With a sample of 53 companies and an observation period during 2016-2018, the sample that can be used in this research is 159 samples. All classical assumption tests have been fulfilled as a terms of regression analysis. Prior to data analysis, the data was transformed into natural

logarithm (Ln) and then centered in order to make the analysis and interpretation easier.

Table 3: Moderated Regression Analysis Results

Predictors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0,017	0,059		0,286	0,775
IC	0,458	0,166	0,208	2,762	0,006
GCG	-0,803	0,336	-0,189	-2,389	0,018
IC*GCG	2,438	1,153	0,166	2,114	0,036
Adjusted R Squared :					0,117
F :					8,002
F Sig. :					0,000

Based on Table 3, the MRA equation can be drawn up as follows:

$$Y = 0,017 + 0,458 IC - 0,803 GCG + 2,438 IC*GCG + e \quad (2)$$

According to equation 2, If the intellectual capital (IC), GCG, and the interaction between IC and GCG (IC*GCG) are equal zero, then PBV will be 0,017. If IC increases by one unit with the GCG value equal to zero, then each increase of one IC unit will cause an increase in PBV of 0,458. Then if interaction between IC and GCG (IC*GCG) increased by one unit, the PBV will increase by 2,438.

The coefficient of determination can be indicated by the adjusted R-Squared value. The adjusted R-Square value of the regression model is used to specify the capability of an independent variable to explain the dependent variable. Based on Table 3, the adjusted R-Square value is 0,117 indicating that the intellectual capital (IC), GCG, and the interaction of IC with GCG affect PBV by 11,7% and the remaining 88,3% is influenced by other factors outside the research model. . The calculated F value for MRA is 8,002 with a significance level of 0,000, which is smaller than the real level of 0.05, this results conclude that the MRA model is feasible. This means that all independent variables in this research simultaneously affect PBV.

4.1 The Influence of Intellectual Capital on Price to Book Value

Based on Table 3 above, the results show that the effect of intellectual capital on PBV equal 0,458 when GCG is equals zero. The significance level is 0,006 which is smaller than the 0,05 level, this can be concluded that intellectual capital has a positive effect on PBV. According to this result, H₁ is accepted, which means that the higher the intellectual capital utilized, the higher the PBV ratio. The results of this research supported the resource-based theory which explains that company performance will be optimal if the company can make maximum use of its resources so as to create a competitive advantage (Wenferfelt, 1984). The results are also supported by the research results of Simanungkalit & Prasetiono (2015), Ozer & Çam (2016), Nurhayati (2017), Sardo & Serrasqueiro (2017), and Suryarahman (2018) showing that intellectual capital affects PBV ratio positively. Intellectual capital is a form of the company's capability to utilize their resources that is reflected as capital employed, with proper management the company could improve its performance, which will cause the market perceptions of the company's prospects in the future will increase as reflected on the PBV value. Companies that are able to manage company assets maximally will be able to create value added and increasing the company's value (Handayani, 2015).

4.2 The Moderating Form of Good Corporate Governance in the Influence of Intellectual Capital on Price to Book Value

Regression coefficient of IC*GCG is also shown in Table 3, the value of the coefficient is 2,438 with a significance level of 0,036 which is smaller than the significant level of 0,05. This means that high GCG causes the effect of IC on PBV will be more positive. Based on this, H₂ is accepted. The results mean that with the implementation of GCG in companies listed on the IDX, it can increase the positive influence of IC on the PBV. In the view of resource-based theory, the GCG mechanism can be categorized as a company resource (Wenferfelt, 1984). Resource-based theory define that the maximum utilization of company resources can produce a prolonged competitive advantage, but these resources require good management (James & Corina, 2015). High intellectual capital certainly requires

good corporate governance so that its resources can be maximally utilized. Based on the results of this research, GCG can be a factor that can increase the utilization of intellectual capital in increasing PBV. The results prove a contingency theory which is based on the premise that there is no universal condition that applies equally to all organizations in all situations. The company will depend on certain circumstances where an organization can find its uniqueness. Thus, contingency theory must identify certain aspects related to certain predetermined circumstances which indicate an appropriate match, in this case increasing the use of intellectual capital in increasing investors' perceptions of the company's future prospects.

5. Conclusion and Suggestions

5.1 Conclusion

According to the analysis and discussion of the results, the main findings in this study is intellectual capital the price to book value positively. This means that the higher the intellectual capital utilization, the higher the PBV that will be increased. Then high good corporate governance causes the effect of intellectual capital on price to book value to be increasingly positive. This means that the higher the GCG implementation, the higher the effect of intellectual capital on PBV.

5.2 Suggestions

As suggestion, companies are expected to increase the use of intellectual capital or intangible assets that will increase added value for the company. Also, it must be followed by complying the GCG principles in order to increase investors' perceptions of the company's future prospects as will be reflected in the PBV ratio. Investors who want to invest in companies that are incorporated in the IDX should pay attention to the company's capability to utilize intellectual capital in an effort to increase added value for the company and complying to GCG principles is also an aspect that can increase and maximize the utilization of the intellectual capital, so by applying the GCG principles in the utilization of intellectual capital can be taken into consideration in making investment decisions.

Further research is expected to use the proxy of intellectual capital by using the Skandia IC Report Method or Economic Value Added (EVA) instrument in order to develop factors that can influence PBV because this research found that the intellectual capital, GCG, and the interaction of intellectual capital and GCG were only affected PBV by 11,7 percent. In addition, further researchers can also consider adding other predictor or moderating variables such as company growth, financial ratios and the application of corporate social responsibility (CSR).

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