

THE INFLUENCE OF INTELLECTUAL CAPITAL ON FIRM VALUE, WITH FINANCIAL PERFORMANCE AS A MODERATING VARIABLE

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ABSTRACT

The market's favorable impression of a firm rests in large part on the value of the company's intangible assets, including its intellectual capital. This research aims to examine the connection between intellectual capital and corporate value via the lens of financial performance. This study uses data from 2016-2019 to analyze a sample of companies that are members of the Jakarta Islamic Index (JII). Worth Added Intellectual Coefficient (VAIC) is a measure of intangible assets, Return on Assets (ROA) is a measure of financial performance, and Price to Book Value is a measure of firm value (PBV). Based on the data presented here, it appears that (1) intellectual capital significantly improves financial performance, (2) intellectual capital has no effect on business value, and (3) financial performance can mediate the relationship between intellectual capital and firm value.

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1. INTRODUCTION

Current trends in the corporate sector point to the emergence of a new economic era that values expertise as a scarce resource. Financial resources that lack a concrete form are known as intangible assets (Widiyaningrum, 2014). Value creation is the primary focus of a knowledge-based economy. In the meantime, value creation necessitates accurate assessment of both physical capital (i.e., money) and intellectual potential (represented by personnel with all their potential and abilities) (Thaib, 2013).

In most cases, a company's worth is determined by its cash, office inventory, machinery, and buildings, all of which exist in the real world and can be handled and examined (Aida & Rahmawati, 2015). Things are different now, though. Intangible assets, such as a company's intellectual property, brand name, or human resources, also contribute significantly to a business' overall worth (Dewi & Badjra, 2017; Achmad, 2022). Knowledge-based enterprises' book value and market value are directly proportional, demonstrating the vitality of intangible assets (Bahuwa et al, 2020). Intellectual capital is one method used in the valuation and measurement of intangible assets (Artati, 2017).

Intellectual capital is defined by the International Federation of Accountants (IFAC) in Widiyaningrum (2014) as "knowledge assets," which can be thought of as "shares" or "capital" based on the company's knowledge. When correctly developed, preserved, converted, and managed, a company's knowledge can serve as a valuable resource for years to come. This is what intellectual capital, as defined by Kuryanto and Syafruddin (2008), is. Human capital, structural capital or organizational capital, and relational capital or customer capital are the three pillars of intellectual capital, as posited by practitioners (Sawarjuwono & Kadir, 2003).

The researcher in this study makes use of concepts and procedures created by Pulic, such as the Value Added Intellectual Coefficient (VAIC). The VAIC is a tool for gauging the ROI of a company's intellectual resources (Ulum, 2008). Since it is built off of the records found in the business's financial statements, this method is practical and straightforward to implement.

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Employed Capital, Human Capital, and Structural Capital are the three parts that make up VAIC. With proper administration, upkeep, and reorganization, these three resources form the backbone of the company and guarantee its continued success (Wijaya, 2012).

In accordance with conservative accounting principles, an expansion in the gap between market value and book value is credited to a company's investment in intellectual capital. If the market is efficient, for instance, then shareholders will place a premium on enterprises with more substantial intellectual capital (Sirojudin & Nazarudin, 2014). The value of a corporation can be thought of as the difference between its market value and its book value; as this difference grows, so does the company's value. Optimizing the company's value, as measured by the stock price, is the company's primary long-term objective (Sunarsih & Mendra, 2012). This research's stock market price is reflective of the market's perception of the company's worth.

The definition of a company's worth is the price willing purchasers are willing to pay if the company is sold. If the share price rises, an increase in the company's value can bring prosperity to shareholders (Indriyani, 2017; Achmad, 2021). If the company's worth is high, it demonstrates that it is able to explain high stock prices and how successfully or poorly management handles the company's assets. Financial performance is a description of a company's financial position that is studied with financial analysis tools to provide information about the company's excellent and bad financial conditions (Sudibya & Restuti, 2014; Achmad & Yulianah, 2022). High financial performance indicates that the company's prospects are improving, indicating the potential for increasing profits.

Intellectual capital is a good notion that, if utilized by the firm, will boost investor confidence in the company and lead to a rise in investment for the company, hence raising the value of the company and providing benefits for the company. In this study, financial performance was utilized as an intervening variable because it is one of the criteria that show an organization's efficacy and efficiency in achieving its objectives (Gany & Nugrahanti, 2015 Ilhami & Achmad, 2022). In this example, the objective is the company's objective, which is to increase the company's worth. The stock price of the corporation reflects the company's worth. Therefore, companies with a high company value can be obtained through optimizing intellectual capital inside each organization, thereby enhancing company performance. This study employs the VAIC proxy for intellectual capital, the PBV proxy for business value, and the ROA proxy for financial performance.

2. METHOD

This research is similarly quantitative in character, evaluating hypotheses through numerical measurement of research variables and statistical analysis of data. This study uses time series data in the form of firm annual reports provided by Jakarta Islamic Index members from 2016 to 2019. The companies listed on the Jakarta Islamic Index (JII) for the 2016-2016 period comprised the study's population. 2019. This study's sample utilized a form of purposive sampling. This study's dependent variable is firm value, which is assessed by the price to book value ratio (PBV). As the independent variable in this investigation, intellectual capital is represented by the acronym VAIC. In this study, the final intervening variable is financial performance as evaluated by Return On Assets (ROA).

Path analysis is the technique employed for analysis in this study. Path analysis is an extension of multiple linear regression analysis that is used to estimate the causal linkages between variables that have been previously identified based on theory. In route analysis, a variable serves as both an independent variable in one connection and a dependent variable in another relationship due to the existence of a layered causality relationship (Ghozali, 2011; Yulianah, 2022). For this study's problems, the authors conduct a statistical analysis of linear

regression and path analysis by analyzing the outcomes of the analysis with descriptive statistics, a classical assumption test, linear regression analysis, and path analysis.

3. RESULTS AND DISCUSSION

Descriptive statistics

For statistical tests can be seen from table 1 below:

Table 1 Descriptive statistics

	VAIC	ROA	PBV
mean	6.886	0.159	5.218
median	6.514	0.138	2,592
Maximum	12,590	0.555	53,590
Minimum	2,972	0.031	0.187
Observations	45	45	45
Cross Sections	15	15	15

It can be observed from table 1 that the average value of the VAIC data is 6.89. The average value of the VAIC is greater than 3, indicating that the average firm listed on the Jakarta Islamic Index (JII) meets the TOP Performers criteria, indicating a high level of asset use and optimization. This demonstrates that every company included on the Jakarta Islamic Index (JII) has used intellectual capital, and it is thought that every company realizes the significance of intellectual capital to its existence. It can be demonstrated by the minimal VAIC score still included in the requirements for Good Performers, which is above the range of 2.0 to 2.99. And the maximum VAIC score for the Top Performers category, which is greater than 3, is 4. The market price of a company's shares will reflect its market value, which is the company's selling price or its growing value for shareholders. It can be observed in table 1 that the average PBV is 5.21. This average figure indicates that investors value firms listed on the Jakarta Islamic Index (JII) 5.21 times higher on average. The company's financial performance reflects its capacity to manage and govern its resources. In table 1, the average ROA, a proxy for financial performance, is 0.15, or 15%, for companies listed on the Jakarta Islamic Index (JII). This score indicates that the average Jakarta Islamic Index (JII) company has not been able to be evaluated for its good financial performance, since its financial performance percentage is below 20%.

Panel Data Regression Analysis

1. Analysis of the Effect of VAIC with ROA

The objective of regression analysis is to discover the direction of the relationship between an independent variable and a dependent variable and to quantify their effect. This regression equation is a Random Effect model regression:

Table 2. Regression Test Results of Random Effect Model

Variable	Coefficient	t Statistics	Prob.
C	-0.000225	-0.003702	0.9972
VAIC	0.023236	2.851544	0.0068
Sum Squared Resid	0.334844		
Prob (F-statistic)	0.006124		
Adjusted R Square	0.142523		

Based on the findings of the regression, the following regression equation is derived:

$$ROA = 0.000225 + 0.023236VAIC + e$$

The results of the interpretation of the above equation are, first, every 1 unit increase in VAIC will affect an ROA increase of 0.02323 6 units. Second, ROA will be -0.000225 assuming the other independent variables are 0.

2. Analysis of the Effect of VAIC and ROA on PBV

A primary goal of regression analysis is to quantify the impact of an independent variable on a dependent variable by identifying the direction of their connection.

Table 3. Regression Test Results of Random Effect Model

Variable	Coefficient	t Statistics	Prob.
C	-8.388045	-1.972256	0.0553
VAIC	0.637169	1.016206	0.3155
ROA	57.69576	5.299368	0.0001
Sum Squared Resid	1635,457		
Prob (F-statistic)	0.000002		
Adjusted R Square	0.471915		

Based on the above regression results, the following regression equation is obtained:

$$PBV = -8.388045 + 0.637169VAIC + 57.69576ROA$$

First, according to the numerical interpretation of the above equation, for every 1 unit rise in VAIC, the corresponding increase in PBV is 0.637168 units. Second, an increase of 1 unit in ROA results in a 57,69576 unit rise in PBV. Assuming the other variables to be zero, the PBV would be -8.388045.

Path Analysis

After the regression analysis was carried out on the direct and indirect effects, it was continued by calculating the total effect of each path variable and the Sobel test to determine whether there was a mediating effect. Because t count = 2.477184 is greater than t table with a significance level of 0.05, which is 1.67943, it can be concluded that the mediation coefficient is 1.3405607 significant, which means there is a mediating effect.

Hypothesis test results

Hypothesis testing is carried out to find out whether the hypothesis that has been made in the study is in accordance with the research results or not.

1. F Test Effect of VAIC on ROA

The value of Prob. F Statistics is 0.006124, and this is based on the estimation of capital used in this study (the Random Effect model). In light of the fact that the value of this model's equations is less than 0.05 alpha, it may be safely assumed that the model is applicable. Therefore, this model's equations can be utilized to describe how VAIC (intellectual capital) influences ROA (return on investment) (financial performance).

The adjusted R-Square for this regression is 0.14. Which demonstrates that intellectual capital can account for 14% of the variance in financial outcomes and that the remaining 86% can be accounted for by other variables.

2. F Test Effect of VAIC and ROA on PBV

Statistically, this equation model can be used to explain the effect of the independent variables VAIC (intellectual capital) and ROA (financial performance) on the dependent variable PBV (market value of the firm), as determined by the estimation model chosen to be used in this study, namely the Random Effect model, with a Prob value. F statistic of 0.00002 when compared

to alpha 0.05 being smaller (firm value). The regression's adjusted R-Squared value is 0.47. Which indicates that intellectual capital and financial performance can account for 47% of the variance in firm value, while other factors account for the remaining 53%.

3. t-test Effect of VAIC on ROA

The estimation of random effects reveals from table 2 that the VAIC variable has a constant of 0.023236 and a prob t value of 0.0068. A constant value that is positive indicates the direction of the unidirectional relationship, which suggests that if the VAIC increases, so will the ROA. While the probability value of 0.0068 is less than the alpha value of 0.05, the VAIC t value is noteworthy. This demonstrates that VAIC (intellectual capital) has a substantial beneficial impact on ROA (financial performance).

4. VAIC and ROA t-test against RBV

The VAIC variable has a constant of 0.637169 and a prob t value of 0.3155, according to the random effect estimation presented in Table 3. A constant number that is positive implies that the link is unidirectional, meaning that if the VAIC grows, the PBV will also increase. While the probability t-value of 0.3155 is more than the alpha value of 5%, which implies that the VAIC t-value is not significant, the VAIC variable (intellectual capital) has no statistically significant impact on PBV (firm value). ROA has a constant of 57.69576 and a value of 0.0001 for its prob t. A positive constant value indicates the direction of the unidirectional relationship, which indicates that if ROA increases, PBV will also increase, and the probability value of 0.0001 is less than alpha 5%, indicating that the t value of ROA is significant, which statistically indicates that the ROA variable (financial performance) had a significant positive effect on PBV.

Discussion

The statistical analyses in this study shed light on the favorable impact that intellectual capital has on Jakarta Islamic Index (JII) firm's bottom line. This research demonstrates that raising a company's focus on optimizing its intellectual capital can boost its bottom line. This lends support to the Resource Based Theory, which postulates that organizations that prioritize allocating resources toward achieving excellence are more likely to succeed. By maximizing the company's intellectual capital, the company will be able to access superior resources. As a result, if the business is successful in optimizing the use of its intellectual capital, it will be better equipped to make profits from its entire assets (Dewi & Isynuwardhana, 2014).

The results of this analysis indicate that intellectual capital contributes nothing to the value of a company. It means that the request was declined. The findings of this research suggest that investors do not place a high value on Jakarta Islamic Index (JII) firms that excel at maximizing their intellectual capital. Despite the fact that the vast majority of companies listed on the Jakarta Islamic Index (JII) operate in the manufacturing sector, investors continue to give these businesses good marks because they place a premium on the companies' physical assets (Sunarsih & Mendra, 2012).

Sobel test findings indicate that financial success might moderate the connection between intellectual capital and corporate value. That means it's generally accepted. This demonstrates that organizations with stronger financial performance will receive higher ratings from investors. The stock price of a firm will reflect the market's level of appreciation for it, which will be higher if the company has shown strong financial performance. Stakeholder theory, which holds that the corporation has a duty to disclose material information to its constituents, is likewise supported by this study. By disclosing the firm's financial performance, shareholders can evaluate whether or not the company has delivered on its promises to them, and this evaluation will be reflected in the company's share price (Sudibya & Restuti, 2014).

4. CONCLUSION

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Based on the findings, it's safe to say that enhancing intellectual capital management and utilization can have a favorable effect on financial performance. This is because increased productivity within an organization is expected to trickle down to the bottom line. The fact that the study revealed no correlation between intellectual capital and business value demonstrates that investors do not consider intellectual capital to be an important part of valuation, and that the market continues to reward companies for their physical assets. Finally, the link between intellectual capital and corporate value is mediated through financial performance. This demonstrates that the market cares more about the Jakarta Islamic Index's (JII) financial success than the company's intellectual capital capacity.

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