MODERATING EFFECT OF PROFITABILITY: ANALYSIS ON ENVIRONMENTAL CERTIFICATION, FINANCIAL PERFORMANCE, AND MARKET REACTION

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Abstract
Companies have good credibility to encourage investors to invest their capital. This is based on the company's success which can be seen from the company's performance. The company's performance can be measured from financial performance. Therefore, this research aims at revealing the influence of Intellectual Capital on Company Value with Financial Performance as an Intervening Variable in LQ45 Companies listed on the BEI in 2014-2018. This research used descriptive and verification quantitative methods. The research was conducted in 17 companies based on a purposive sampling technique with an observation period of five years. The result of the analysis was that the calculated t was greater than the t table. Thus, it showed that there was an influence of intellectual capital on company value with Financial Performance (ROE) not being able to mediate the influence of Intellectual Capital on Company Value.

INTRODUCTION

In the business sector, competition drives organizations to become more competitive to remain in the market. One of the company's strategies is to enhance performance, particularly financial performance. According to Fahmi (2012), financial performance analysis measured how well a business used the principles of sound financial implementation. The company can offer advantages in terms of the usage of assets, equity, and debt is also demonstrated by its financial performance. When a company is funded, its goal is to make money and stay in business. To do this, it must expand all of its operations and maximize its resources to maximize revenues (Faizal, 2011; Evans and Kartikaningdyah, 2019).

A company's primary objective was to maximize profits; additional objectives included the prosperity of the company's owners or shareholders and, the achievement of a high share price, which boosted the company's overall value (Guna and Herawaty, 2010; Nurminda et al, 2017). Companies frequently cause conflicts of...
interest between management and stakeholders in the process of accomplishing their aims. To solve issues that arose within the organization, managers must take proactive measures. Managers' actions had to be directed toward the objectives of the firm (Basir, Arindha and Prajawati, 2019). Achieving corporate objectives through a rise in value demonstrates the company's capacity to satisfy investor demands and boost shareholder wealth.

The firm's worth is a reflection of its performance, which naturally affects investors' perceptions and inclination to purchase company stock. Because the company's ability to create value gives investors optimism for significant returns. According to Rudangga and Sudiarta, (2016), a company's welfare increased with its value. Therefore, every firm's long-term objective was to maximize corporate value. The goal of this endeavour was to create a business with potential. The aforementioned issues led to the conclusion that businesses involved in property and real estate were not performing at their best when it came to making money(Sadalia et al., 2019). Business actors realized that a company's competitive ability laid not only in the ownership of tangible assets but also in innovation, information systems, organizational management, and organizational resources it owned (Widarjo 2011). This realization led to the disclosure of non-financial information about intangible assets. As a result, businesses gave knowledge assets—a type of intangible asset—priority. Intellectual capital was one method that could be used to quantify and evaluate knowledge assets.

Intangible asset ownership is just one aspect of company rivalry; other areas include innovation, information technology, organizational management, and resource availability. As a result, every business is today stressing the value of knowledge assets more and more. Petty and Guthrie., (2000) found that a variety of methodologies, including Intellectual Capital (IC), can be employed to evaluate and quantify knowledge assets. According to Sunarsih (2012), every business that could use intellectual capital effectively and efficiently would see a simultaneous increase in its market value. In this way, a company's ability to generate profits and market value was measured by its financial performance. In addition to assess a company's capacity to turn a profit over a given time frame, the profitability ratio offered a broad picture of the efficacy of management in carrying out day-to-day operations (Sanjay and Rizky, 2018). Based on sales activities, asset utilization, and capital utilization, a company's profitability ratio indicated its capacity to turn a profit using all of its resources (Hery, 2014). The return on assets (ROA) served as a stand-in for the profitability ratio in this research.

Investors considered some factors when selecting the shares in which to invest, including financial performance(Dwiyanthi and Sudiartha, 2017). A company's performance can be used to determine its level of success. A corporation might be considered more successful if its financial performance was strong. A company's success or failure can be determined by its performance. Performance evaluation served as a tool for the management of the business to use in decision-making and to demonstrate the company's strong credibility to investors, clients, and the public at large. Investors would be more inclined to invest their money if the company had a high level of trustworthiness (Abdul Rasyid, 2015)

Company performance in this research was measured using ROE (Return on Equity). ROE was used to measure how much profit a company generated from shareholder capital. If the ROE was higher than the capital costs incurred, it showed that the company had been efficient in using business capital, so there was an increase in the company's profits each period (Sudibya & Restuti, 2014). LQ45 Company was chosen as a sample to be studied in this research. This was because LQ45 shares were active shares so they could constantly experience price changes. LQ45 shares were known as safe shares to invest in because they looked at the risk of the LQ45 share group having the lowest risk compared to other shares listed on the IDX. However, there was an interesting phenomenon that currently it was observed that not a single stock on the LQ45 list had recorded green performance since the beginning of the year until trading. There were even 10 companies listed on LQ45 that dropped down more than 50%. Based on this phenomenon, the authors attempted to reveal how much influence Intellectual Capital had on Company Value with Financial Performance as an Intervening Variable in LQ45 Companies listed on the Indonesian Stock Exchange in 2014-2018.

METHODS

This research was conducted using quantitative methods and a descriptive verification research approach. The authors used descriptive quantitative statistics. Then, secondary data from the idx.id source, then the processed results, namely in the form of numbers, were developed again using descriptive. The goal was to be more specific so that it provided a clear picture. A descriptive approach was used to reveal intellectual capital, financial performance and company value in LQ45 companies listed on the Indonesia Stock Exchange 2014-2018. Intellectual capital is the independent variable that was used in this study. Financial Performance is the intervening variable, while Company Value is the dependent variable. Meanwhile, verification was used to reveal the influence of Intellectual Capital on Company Value with Financial Performance as an Intervening Variable in LQ45 companies listed on the Indonesia Stock Exchange 2014-2018. The research was conducted
in 17 companies listed on the stock exchange which were selected based on a purposive sampling technique with the following criteria. LQ45 company which had complete data related to the variables used in the research during the 2014-2018 period. Companies listed on LQ45 consecutively during the 2014-2018 period. LQ45 company that publishes financial reports using the Indonesian currency (Rupiah). The data obtained was then analyzed by carrying out path analysis, hypothesis testing, and calculating the coefficient of determination.

Next, conclusions are drawn from the research described descriptively.

<table>
<thead>
<tr>
<th>Table 1. Sample Criteria</th>
<th>Information</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population of LQ45 companies listed on the IDX for the 2014-2018 period</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Criteria:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The LQ 45 Index companies were not consecutively included in the 2014-2018 Report</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>LQ 45 Index companies have shifted from the LQ 45 Index</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>LQ 45 Index Company that publishes financial reports using the Dollar currency</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Sample companies</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Year of observation</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Total sample</td>
<td>85</td>
<td></td>
</tr>
</tbody>
</table>

**RESULTS**

The influence of intellectual capital on company value with financial performance as an intervening variable was revealed through procedural analytical stages. The initial stage was to describe each variable which included minimum value, maximum value and mean (average) through descriptive statistics. The results of descriptive statistical testing concerning intellectual capital (MVAIC), financial performance (ROE), and company value (PBV) were shown as follows:

As presented in Table 1, it can be seen that the number of samples (n) for each research variable is 85 research samples. For the MVAIC variable, the minimum score was 2.99 and the maximum score was 54.82. The average value of the MVAIC variable obtained was a score of 18.2373 with a standard deviation value of 13.37803. As for the Return on Equity (ROE) variable, it appeared to have a minimum score of 0.62 and a maximum score of 17.99%. The average value obtained by the ROE variable was 3.1495% with a standard deviation value of 3.73395. The Price to Book Value (PBV) variable showed that the minimum score was 0.23 and the maximum score was 8.79. The average value of ROE obtained was a score of 2.9001 with a standard deviation value of 1.79327.

Referring to the descriptive analytical results, the normality assumption was then tested to reveal whether the data used was normally distributed or not. Many ways can be used to detect the normality of data, in practice researchers use the Kolmogorov-Smirnov method with the condition that if the Sig. > 0.05 then it can be decided that the normality assumption had been met. From the test results Sig. greater than 0.05. Thus it can be said that the normality assumption had been fulfilled. In connection with these results, the next step was to calculate the correlation (r) between the independent variable and the dependent variable to reveal the relationship between the variables involved in the model.

Based on the results of the correlation coefficient calculation above, it can be seen that the correlation value between intellectual capital (MVAIC) and company value (PBV) was 0.335, in the correlation range between 0.20–0.399. Therefore, it illustrated that there was a relationship between intellectual capital (MVAIC) and company value (PBV), but in the low category. The correlation value between financial performance (ROE) and company value (PBV) showed a score of 0.517, which was in the correlation range between 0.40–0.599. Thus, it can be stated that there was a strong relationship in the category between financial performance (ROE) and company value (PBV).

Likewise, the correlation value between intellectual capital (MVAIC) and financial performance (ROE) was at a score of 0.238, which was between the correlation range of 0.20–0.399. These results showed that there was a relationship, but in the low category, between intellectual capital (MVAIC) and financial performance (ROE).

Path coefficient testing on MVAIC and ROE variants was carried out using LISREL 9.30 and SPSS 22.0. The results can be seen in the following table image.
The results seen in the table above showed that the path for MV AIC (\(\rho_{XY}\)) is 0.224 and for ROE (\(\rho_{YZ}\)) it is 0.464. The magnitude of the influence contribution given can be seen in the following table.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.651</td>
<td>0.290</td>
<td>5.691</td>
</tr>
<tr>
<td>MV AIC</td>
<td>0.030</td>
<td>0.013</td>
<td>0.224</td>
<td>2.380</td>
</tr>
<tr>
<td>ROE</td>
<td>0.223</td>
<td>0.045</td>
<td>0.464</td>
<td>4.929</td>
</tr>
</tbody>
</table>

a. Dependent Variable: PBV
Source: data processed using SPSS 22.0

Table 3. Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.561a</td>
<td>0.315</td>
<td>0.298</td>
<td>1.50226</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), ROE, MVAIC
Source: data processed using SPSS 22.0

Table 3 presented that the R2 value obtained was 0.315. This meant that Intellectual Capital (MVAIC) and financial performance (ROE) together contribute an influence of 31.5% to company value (PBV), while (1-R2) the remaining 68.5% was the large contribution of influence provided by factors others not studied (\(\varepsilon^2\)). Based on these results, the structural equations related to the influence of Intellectual Capital (MVAIC) and Financial Performance (ROE) on Company Value (PBV) were as follows: PBV = 0.224 (\(\rho_{MVAIC}\)) + 0.464 (\(\rho_{ROE}\)) + 0.685 (\(\varepsilon^2\))

To illustrate in more detail, the path coefficient (\(\rho_i\)) and epsilon (\(\varepsilon^2\)) would appear in the following figure:

Figure 1. Path Model
Source: Data Processed using LISREL 9.30

Intellectual capital (MVAIC) contributed 5% to Company Value (PBV), while Financial Performance (ROE) contributed 21.5% to Company Value (PBV).

The next effort to reveal the effect carried out a partial t-test with the t table value used as the critical value in this partial hypothesis test (t-test) of 1.664. This score was obtained from the t-distribution table with df (n - (k+1)) = 82 at a significance level (a) of 5% for one-tailed testing. The following were presented regarding the test results in the following table:

Table 4. Hypothesis Testing (t-Test) Intellectual Capital (MVAIC) on Company Value (PBV)

<table>
<thead>
<tr>
<th>Model</th>
<th>Tcount</th>
<th>ttable</th>
<th>A</th>
<th>Sig.t</th>
<th>Decision</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPAIC → PBV</td>
<td>2.380</td>
<td>1.664</td>
<td>0.05</td>
<td>0.020</td>
<td>Ho rejected</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Source: data processed using SPSS 22.0

Table 4 illustrated that the t-count value obtained was 2.380 with a Sig value 0.020 < 0.05 (a). When presented on a partial hypothesis testing curve, the areas of rejection and acceptance of Ho would appear as follows:
As presented in Table 5, the information was obtained that the t count value obtained is 4.929 with a value of Sig. 0.000 < 0.05 (a). When presented in a picture of a partial hypothesis testing curve, the areas of rejection and acceptance of Ho.

To test this simultaneous hypothesis was the F test. The calculation results showed that the Ftable value used as a critical value in this simultaneous hypothesis test was 3.108 which was obtained from the attached F distribution table with df1 (k) = 2 and df2 (n-(k+ 1)) = 82 at significance level (a) of 5%. Test results can be seen in the following table:

Table 5. Hypothesis Testing (t-Test) Financial Performance (ROE) on Company Value (PBV)

<table>
<thead>
<tr>
<th>Model</th>
<th>Tcount</th>
<th>ttable</th>
<th>α</th>
<th>Sig.t</th>
<th>Decision</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE - PBV</td>
<td>4.929</td>
<td>1.664</td>
<td>0.05</td>
<td>0.000</td>
<td>Ho rejected</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Source: data processed using SPSS 22.0

Table 6 presented that information was obtained that the F-count value obtained was 18.848 with a Sig value. 0.000 < 0.05 (a). Referring to the picture, it can be seen that the F-count value obtained was 18.848 and this value was much greater than the F table value of 3.108 so it fell in the Ho rejection region. Through a confidence level of 95%, it can be decided that Ho was rejected and Ha was accepted. This meant that Intellectual Capital (MVAIC) and Financial Performance (ROE) simultaneously had a significant influence on Company Value (PBV).

From the results obtained, direct and indirect contributions were calculated. The following equation was obtained: ROE = 0.238 (ρMVAIC) + 0.943 (ε1), PBV = 0.224 (ρMVAIC) + 0.464 (ρROE) + 0.685 (ε2). If mapped in a mediation model path diagram, it would appear as follows: The calculation of the magnitude of the contribution of direct and indirect effects from the path diagram above can be seen in the following description: Direct influence of MVAIC on PBV = (ρYX)2 x 100 = (0.238)2 x 100 = 5.7%. Intellectual Capital (MVAIC) directly contributed an influence of 5.7% to Company Value (PBV). Direct influence of MVAIC on ROE = (ρZX)2 x 100 = (0.238)2 x 100 = 5.7%. Intellectual Capital (MVAIC) directly contributed an influence of 5.7% to Financial Performance (ROE). Direct effect of ROE on PBV = (ρYZ)2 x 100 = (0.464)2 x 100 = 21.5%.

Financial Performance (ROE) directly contributed an influence of 21.5% to Company Value (PBV). The indirect influence of MVAIC on PBV through ROE = (ρZX x (ρYZ x 100 = 0.238 x 0.464 x 100 = 11.1%). Intellectual Capital (MVAIC) indirectly contributed an influence of 11% to Company Value (PBV) through Financial Performance (ROE).

Recapitulation of the calculation results of the contribution of direct and indirect influences was presented in the following table:

Table 7. Recapitulation of the Contribution of Direct and Indirect Influences

<table>
<thead>
<tr>
<th>Pi</th>
<th>Direct Effect on ROE</th>
<th>Direct Effect on PBV</th>
<th>Indirect Effect on PBV through ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVAIC → ROE</td>
<td>0.238</td>
<td>5.7%</td>
<td>-</td>
</tr>
<tr>
<td>MVAIC → PBV</td>
<td>0.224</td>
<td>5.0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>ROE → PBV</td>
<td>0.464</td>
<td>21.5%</td>
<td></td>
</tr>
</tbody>
</table>

Source: data processed using SPSS 22.0 and MS Excel 2013
To strengthen the evidence in the model studied, there was an intervening (mediation) effect, a Sobel test was then conducted with the following results. The Z table value used as a critical value in the Sobel test was 1.96, which is the standard Z distribution value at an error level of 5%. The test results were presented in the following table:

<table>
<thead>
<tr>
<th>Model</th>
<th>Zcount</th>
<th>Ztable</th>
<th>p-value</th>
<th>α</th>
<th>Decision</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>MV AIC-PBV-ROE</td>
<td>2.036</td>
<td>1.96</td>
<td>0.041</td>
<td>0.05</td>
<td>Ho rejected</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Source: data processed using SPSS 22.0

Table 8 showed that the Z count value obtained was 2.036 with a p-value of 0.041 < 0.05 (a). If these results were plotted in a partial hypothesis testing curve image, the areas of rejection and acceptance of Ho would appear as follows.

From the hypothesis testing curve image above, it can be seen that the Z count value of 2.036 fell in the Ho rejection area. Thus, with a confidence level of 95%, it could be decided that Ho was rejected and Ha was accepted. This meant that Intellectual Capital (MV AIC) through the mediation of Financial Performance (ROE) had a significant influence on Company Value (PBV). When the company had a higher MV AIC value and was supported by a high ROE value, it would have an impact on the higher PBV Company Value.

DISCUSSION

The purpose of this test's results discussion was to highlight how intellectual capital (MV AIC) affected business value. Intellectual Capital (MV AIC) had a positive effect on Return on Equity (ROE). This was not in line with the research presented by Sunarsih, (2012) showing that Intellectual Capital had a positive effect on financial performance. Sunarsih and Mendra (2012) in their journal stated that the more efficiently a company managed the intellectual resources (physical capital, human capital and structural capital) owned by the company, it would provide increased results as indicated by the increase in the company's financial performance. PBV served as a stand-in for Company Value, while MV AIC represented Intellectual Capital. As a result, the test results were discussed to reveal the hypothesis's findings. According to the research findings, PBV served as a stand-in for company value, whereas MV AIC stood for intellectual capital (Nuryaman, 2015). This was consistent with research that was presented by Sirojudin and Nazaruddin (2014), who discovered that intellectual capital significantly increased the value of a company. It had been discovered that a company's worth was impacted by its level of intellectual capital. In this scenario, companies with more intellectual resources would be valued more highly by investors than those with less intellectual resources. The share price of the company would represent the value that investors had placed on it. The discussion of the results of this test was to reveal the test of the influence of Intellectual Capital (MV AIC) on Company Value as proxied (PBV) with Financial Performance (ROE) as mediation (Intervening). Thus, the discussion of the results of this test was a disclosure of the results of the hypothesis.

The hypothesis stated that Return on Equity (ROE) can mediate the influence of Intellectual Capital on Company Value. This was not in line with research proposed by Sunarsih and Mendra (2012) which stated that Intellectual Capital was believed to play an important role in increasing company value and financial performance. Companies that can utilize their Intellectual Capital efficiently would increase their market value. So, the greater the VAICTM, the more efficient the use of company capital, thereby creating added value for the company (Appuhami, 2007; Chenault, 2003; Fajaria, 2018; Bandanuji and Khoiruddin, 2020)). So it can increase the company's market value, because market value was created by the capital used by the company, including Intellectual Capital. If a company can manage and continue to improve the three components of its Intellectual Capital well, it could improve financial performance, so that it could attract the attention of investors to invest because they gave high value to the company. Furthermore, previous research conducted by Belkaoui and Riahi, (2003) and Chen, M.C. and S.J., Hwang, (2005) showed that Intellectual Capital has a positive effect on company performance and market value.

In conclusion, these results were in line with those stated by Untari (2018) that the presence of Intellectual Capital did not improve company performance, so the higher level of Intellectual Capital disclosure would not influence the company's financial performance. It also did not have a role as an intervening variable between the relationship between Intellectual Capital and company value, so that Intellectual Capital had no direct or indirect influence on company value.
CONCLUSIONS

The document concluded research on the Intellectual Capital (IC), Return On Equity (ROE), and Price to Book Value (PBV) of companies listed on the Indonesia Stock Exchange LQ45 index from 2014 to 2018. The findings indicated that the Intellectual Capital, represented by MVAIC, experienced both increases and decreases among the sampled companies. Notably, some companies, such as BNI (persero) Tbk and Adhi Karya (persero) Tbk, experienced an increase, while others, like Bumi Serpong Damai Tbk and Indofood Sukses Makmur Tbk, exhibited a decrease. The research also observed fluctuations in ROE and PBV, with PT Bank Central Asia Tbk showing consistent improvement in ROE and several companies experiencing fluctuating PBV. Additionally, statistical tests concluded that there was no significant influence of MVAIC on ROE, while there was a significant effect of MVAIC on PBV. However, the research found that ROE could not mediate the relationship between Intellectual Capital and Company Value.

The document also provided recommendations based on the research findings. Firstly, it suggested that companies should strive to maintain and enhance their Intellectual Capital for increased efficiency and stability, ultimately leading to improved company value. Additionally, to build investor trust and enhance company value, consistent dividend distribution and a strong ROE performance were recommended. Furthermore, for future researchers, the authors suggested expanding the research scope to include multiple company indexes for a more comprehensive understanding and considering additional indicators of profitability, such as ROI, ROA, GPM, NPM, and Rentability as intervening variables.

In summary, the document presented a comprehensive analysis of the Intellectual Capital, ROE, and PBV trends among companies listed on the Indonesia Stock Exchange LQ45 index from 2014 to 2018. It highlighted the varied performance of these metrics across different companies and offered valuable insights for companies and future researchers to consider in their endeavours to enhance company value and conduct more extensive studies on this subject.

REFERENCES


