Impact of Intellectual Capital, Capital Structure, and Credit Risk on Financial Performance on Banking Companies Listed on the Indonesian Stock Exchange

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Abstract---The purpose of this study is to obtain empirical evidence of Intellectual Capital, Debt to Equity Ratio, and Non Perfroming Loan on Banking Firm’s Performance on the Indonesia Stock Exchange. The sampling technique used purposive sampling, the research samples obtained totaled 46 company with annualy research period from 2018-2022 so that there were 27 units of analysis. The research design was quantitative descriptive. The analysis technique in this research is multiple regression analysis method. The results showed that Debt to Equity Ratio, and Non Perfroming Loan has a significant positive effect on Banking Firm’s Performance. The implication of this research is that companies must pay attention to Intellectual Capital, Debt to Equity Ratio, and Non Perfroming Loan that can affect Firm Performance so that company profitability can increase.

Keywords---capital structure, intellectual capital, non performing loan, ROE.

Introduction

Companies are increasingly striving to improve quality in improving corporate management and management in order to be able to compete in today's competitive, innovative and transformative classification world. Many efforts are being made by companies to improve performance following the negative impact of the COVID-19 pandemic on economies around the world, especially in developing countries such as Indonesia. Assessment of financial performance is important for all parties that have an interest in the company. For companies that go public, financial performance is the judgment that becomes the reflection measure of investors in determining the transaction to buy and buy stocks (Nurkhalizah & Diana, 2022).

Financial performance is measured by the ratio of liquidity, solvency ratio, profitability and profitability ratio and activity ratio. (Munawir, 2015). The research focuses on a company performance ratio that is commonly used to measure the ability of enterprises to make profits, namely the profitability ratio. Profitability, the ability of a
company to generate profits through all the capabilities and resources it has, i.e. those derived from sales, use of assets and use of capital (Gogan et al., 2016; Hack Barth et al., 2006; Dangl & Zechner, 2004).

In this study, the determinants chosen to see its impact on profitability are Intellectual Capital, Debt to Equity Ratio, Non Peforming Loan. Intellektual Capital is a portion of intangible assets that can be used by a company to create a competitive advantage. In graph 1.1 above shows the average average Return on Equity companies experience a decrease in fluctuation simultaneously with the Intellectual Capita. It is in line with the Resource Based Theory found by Wernerfelt (1984), stating that companies have resources that can make companies have a competitive advantage and are able to direct companies to have better long-term performance. Debt to Equity has been increasing and rising in parallel with the profitability proxy with Return on Equity. Hal, this is not in line with the Pecking Order Theory by Myers (1984) the greater the debt to equity ratio, suggesting that the higher the cost that the company has to bear to meet its obligations. In 2020-2021, where the value of Return on Equity experienced an annual increase, it was accompanied by Non-Performing Loans from 3.37% to 3.51%. Credit risk is a bank performance risk that demonstrates the bank's ability to manage the credit clog granted by the bank. One of the internal factors that can affect the adequacy of capital and the distribution of credit to profitability is credit risk. (Jayanti & Sartika, 2021).

![Figure 1. Average balance between VAICs, DERs, NPLs and bank ROE registered in the EIB period 2018-2022](Source: Idx.co.id (author-processed data))

There have also been some previous research gaps on Intellectual Capital versus Profitability Kurniawati et al. (2020); Aini & Kristanti (2020); Rosiana & Mahardhika (2021), finding that Intellektual Capital has a positive and significant influence on Profitability. Erfani & Nena (2022), found that Intellectual Capital had a significant negative influence on profitability. Meanwhile, Usman & Mustafa (2019); Fariah & Setiawan (2020); Rahayu et al. (2020); Nurkhalizah & Diana (2022), Intellectual Capital have no influence on profitability.

Prabowo & Sutanto (2019); Astakoni & Nursiani (2020); Brastibian & Rinofah (2020); Kalesaran et al. (2020); Wardoyo et al. (2022), found that Debt to Equity had a positive and significant influence on profitability. Mattiara et al. (2020); Lestari (2020); Ritonga et al. (2021); Juwita & Mutawali (2022), found that Debt to Equity had a negative and significant influence on profitability; Wulandari (2021); Surono & Masyhuri (2021); Nuryanto et al. (2020); Aji & Manda (2021), found that non-performing loans have a positive and significant impact on profitability. Isalina et al. (2020), found that non-performing loans have a negative and significant impact on the profitability of Kulsum & Muniarty (2020); Sukma et al. (2019), Non Performing Loans have no significant effect on profitability. The object in this study is a banking company listed on the Indonesian Stock Exchange for the period 2018-2022. In this study, financial performance is implicit with profitability (Return on Equity) as a dependent variable. Independent variables are Intellectual Capital, Debt to Equity Ratio, Non Performing Loan. Based on phenomena and research gaps above, the author is interested in conducting research with the title “The Impact of Intellectual Capital, Capital Structure and Credit Risk on Financial Performance in Banking Companies Listed on the Indonesian Stock Exchange Period 2018-2022” (Nizam et al., 2019; Sardo et al., 2018; Kalkan et al., 2014; Inderst & Mueller, 2008; Putra & Sedana, 2019; Sugosha & Artini, 2020).
Research Methods

The research objects were carried out on a banking company registered in the EIB for the period 2012-2022. The research uses secondary data from the annual financial statements of the Bank's companies that are available on the Indonesian Stock Exchange. The classical assumption test is conducted before the hypothesis test so that the test results meet the BLUE (Best Linear Unbiased Estimated) criteria, after which the hypothetical test is carried out with the statistic t test, the F test, and the determination coefficient analysis. The model used in this study can be formulated as follows:

\[ Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon \]

Table 1
Operational definition and variable measurement

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Definition</th>
<th>Formula</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Intellectual Capital (X₁)</td>
<td>Intellectual Capital according to Roos et al. (1997), covers all processes and assets that are normally not shown on the balance sheet and all intangible assets (trademarks, patents and trademarks) considered using modern accounting methods.</td>
<td>VAIC = VACA + VAHU + STV A (Pulic, 1998)</td>
<td>Ratio</td>
</tr>
<tr>
<td>2.</td>
<td>Debt to Equity Ratio (X₂)</td>
<td>The debt ratio is calculated by comparing the total debt to the total asset (Brigham &amp; Daves, 2019).</td>
<td>DER = Total Debt/Equity</td>
<td>Ratio</td>
</tr>
<tr>
<td>3.</td>
<td>Non Performing Loan (X₃)</td>
<td>Non Performing loans (NPLs) or non-performing financing (NPFs) are problematic loans consisting of loans that are classified as poorly smooth, doubtful and Macet. (Meydianawathi et al., 2023).</td>
<td>NPL = (Problematic Credit)/(Total Credit)x100%</td>
<td>Ratio</td>
</tr>
<tr>
<td>4.</td>
<td>Profitabilitas (Y)</td>
<td>According to Kasmir (2019), Net Profit Margin is a ratio that calculates the extent to which a company's ability to generate net profit at a certain rate of sales</td>
<td>NPM = company net/sales (Brigham &amp; Daves, 2019)</td>
<td>Ratio</td>
</tr>
</tbody>
</table>

Source: data processed by the author of the selected books.

Result and Discussion

Descriptive statistical analysis results

Table 2
Descriptive statistical results

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>X₁</td>
<td>135</td>
<td>1.1322</td>
<td>6.0362</td>
<td>2.76536</td>
<td>1.0383279</td>
</tr>
<tr>
<td>X₂</td>
<td>135</td>
<td>.0004</td>
<td>2.4921</td>
<td>.500287</td>
<td>.5235013</td>
</tr>
<tr>
<td>X₃</td>
<td>135</td>
<td>.0077</td>
<td>.0774</td>
<td>.032085</td>
<td>.0160458</td>
</tr>
<tr>
<td>Y</td>
<td>135</td>
<td>.0015</td>
<td>.1923</td>
<td>.075936</td>
<td>.0528684</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>135</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS output 25.0 (Author-processed data)

Hypothesis test

Determination coefficient (Adjusted R²)

The determination coefficients test aims to measure how far the ability of an independent variable in describing variable variation depends. shows that variable based on the value of the Adjusted R Square that is applied has the results of
this study model shows at a figure of 0.491 which means that the free variable is only able to explain the variable bound by 49.1% while the remaining 50.9% is influenced by other factors outside this model.

**Partial Test (Uji-T)**

The t-value test is used to measure how far the influence of an independent variable individually in describing variation of dependent variables.

\[
\text{ROE} = 0.157 + 0.51 \text{VAIC} + 0.029\text{DER} -1.790\text{NPL}
\]

**Table 3**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>B</th>
<th>Sig</th>
<th>α</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Intellectual Capital has a significant positive effect on Financial Performance</td>
<td>0.157</td>
<td>0.000</td>
<td>0.05</td>
<td>Results</td>
</tr>
<tr>
<td>H2 DER has a significant positive impact on financial performance</td>
<td>0.51</td>
<td>0.036</td>
<td>0.05</td>
<td>Results</td>
</tr>
<tr>
<td>H3 NPLs have a significant positive impact on financial performance</td>
<td>-1.790</td>
<td>0.000</td>
<td>0.05</td>
<td>Results</td>
</tr>
</tbody>
</table>

Source: SPSS output 25.0 (Author-processed data)

**The Impact of Intellectual Capital on Financial Performance**

Based on the results of the T-Test in table 3, the results were obtained that Intellectual Capital had a significant influence on the Financial Performance projected by Return on Equity in the banking companies listed in the Indonesian Stock Exchange during the period 2018-2022. This can be seen from the test results where the regression coefficient value is 0.051 with a significance value of 0.000 (0,000 < α 0.05), so the first hypothesis (H1) that states that Intellectual Capital has a positive and significant influence against with Return on Equity is accepted. (H1 accepted) (Yang & Pangastuti, 2016; Wu & Shen, 2013; Esteban-Sanchez et al., 2017).

This result is in line with the Resource Based Theory found by Wernerfelt (1984), stating that companies have resources that can make companies have a competitive advantage and are able to direct companies to have good long-term performance. Valuable resources can be directed to create competitive advantages, so that they can last long and not be easily mimicked, transferred or replaced (Kurniawati et al., 2020). The results of this study are in accordance with the results of the study Astari (2019); Fariah & Setiawan (2020); Harahap & Nurjannah (2020); Kurniawati et al. (2020), Aini & Kristanti (2020), found that Intellectual Capital has a positive and significant impact on profitability.

**The impact of profitability on the value of the Company**

Based on the T-Test Results in Table 3, the results of Debt to Equity have a significant impact on the Financial Performance projected by Return on Equity in the banking companies listed in the Indonesian Stock Exchange for the period 2018-2022. This can be seen from the results of the test where the regression coefficient value was 0.029 with a significance value of 0.036 (0,000 < α 0.05), so the second hypothesis (H2) that stated that Debt to Equity had a positive and significant influence against with Return on Equity was accepted. (H2 accepted).

This result is in line with the trade-off theory explaining the exchange between tax benefits and the sacrifices incurred as a result of the use of debt as corporate financing. (Brigham & Houston, 2006). This study is in line with the results of Prabowo & Sutanto (2019); Astakoni & Nursiani (2020); Brastibian & Rinofah (2020); Kalesaran et al. (2020); Wardoyo et al. (2022), found that Debt to Equity had a positive and significant influence on profitability. Mattiara et al. (2020); Lestari (2020); Lutfiana & Hermanto (2021).

**The impact of non-performing loans on financial performance**

Based on the results of the T-Test in table 3, the result was obtained that non-performing loans had a significant negative impact on the Financial Performance projected by Return on Equity in the banking companies listed in the
Indonesia Stock Exchange for the period 2018-2022. This can be seen from the test results where the regression coefficient value was 1.066 with a significance value of -1.790 (0.000 < α 0.05), so the third hypothesis (H3) that stated that Non Performing Loan had a significant negative impact on Financial Performance projected with Return on Equity (H3 accepted).

NPLs can be used to measure the extent to which existing troubled credit can be satisfied with productive assets owned by a company. Kasmir (2019), stated that one of the risks arising from the increasing complexity of banking activities is the emergence of increasing Non Performing Loans (NPLs), high NPLs will increase the cost of holding productive assets and other costs, thereby affecting the decline in bank financial performance. The results of this study are consistent with the findings of studies by Isalina et al. (2020); Ritonga (2020); Korompis et al. (2020); Lestari (2021); Jayanti & Sartika (2021), which found that non-performing loans have a negative and significant impact on profitability

Conclusion

This study aims to test independent variables that consist of Intellectual Capital, Debt to Equity Ratio, and Non Performing Loan influencing Return on Equity. The determination coefficient of this study shows at a figure of 0.491 which means that the free variable is only able to explain the bound variable by 49.1% while the remaining 50.9% is influenced by factors other than this model.

Suggestion

Intellectual Capital, Debt to Equity Ratio, and Non-Performing Loan have a significant impact on the performance of the company. This is done so that the company can raise the Intel Capital, debt to equity ratio in order to improve the company's performance. In addition, it can minimize the Non-performing loan to avoid a decline in profitability. The authors suggest for further research adding or using variables and other research objects so that the research can be further expanded. According to Munawir (2019), the factors that influence financial performance are: Liquidity, Solvency, Rentability or Profitability, which indicate the ability of a company to generate profits during a given period and Economic Stability.

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References


