RESEARCH ARTICLE

The Effect of Profitability, Liquidity and Leverage on Earning Quality with Company Size as a Moderation Variable

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ABSTRACT

The purpose of this study is to examine the Effect of Profitability, Liquidity, and Leverage on Earnings Quality with Company Size as a Moderation Variable (Case Study on the Food and Beverage Sub-Sector Listed on the Indonesia Stock Exchange and Malaysia Stock Exchange in 2018-2021. This research applies secondary data gained from annual reports obtained from the Indonesian Stock Exchange and Malaysia Stock Exchange company websites. The total sampling used in this study is 88 data. The results of this study reveal that profitability significantly negatively affects earnings quality. Significantly, leverage and liquidity do not affect earnings quality. Profitability, liquidity and leverage do not affect earnings quality on company size as a moderation variable. Researchers can develop this study by using different proxies for each variable in order to obtain more robust results.

KEYWORDS

Profitability, Liquidity, Leverage, Earning Quality, Firm Size

ARTICLE INFORMATION

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1. Introduction

Earning quality is the degree of difference between reported net profit and actual profit so that earning quality reflects the company's actual financial performance without manipulation (Pertiwi in Yanto, 2020). Earnings quality focuses on the proportion of profits attributable to the core operations of a business activity (Hasanuddin et al. 2021). Kallapur and Trombley (1999) state profit is considered important information that can determine the decision-making process by interested parties.

In Indonesia, according to the Ministry of Industry, manufacturing companies are one of the national economic sectors and contribute significantly and consistently to the Gross Domestic Product (GDP) of the non-oil and gas industry and increase the ability to make investments. Implementation of investment embodiment: in the third quarter of 2017, the Food and Beverage industry for Domestic Investment (PMDN) received IDR 27.92 trillion, an increase of 16.3% over the same period last year, 2016. Meanwhile, Foreign Investment (PMA) is valued at USD 1.46 billion (Kemenperin, 2019). In 2018, the food industry was one of the supporting industries for increasing the value of national investment, 2018 contributing up to IDR56.60 trillion (Kemenperin, 2019). The Food and Beverage subsector is a pillar of the Malaysian economy, driven by strong domestic demand and healthy exports. Malaysia is a major regional halal Food and beverage export, which is an added advantage (Emis, 2019).

Earnings quality information is believed to be important, especially as a true embodiment of a company's financial performance, which is reflected by profits in its financial statements, as well as being crucial information for investors to make decisions about investing their funds or predicting the company's future profits. (Zatira et al. 2021) . As an example of the phenomenon that occurred in the case of PT Asuransi Jiwasraya (Persero), chairman of the Mr. Agung Firman Sampurna, said that Jiwasraya had suffered losses since 2006. Asuransi Jiwasraya was proven to have manipulated its financial statements by recording a profit,
but it turned out to be false.

2. Literature Review
Signalling Theory has two parties, namely the management from within the company, who is in charge of providing the signal and the outside party of the company, namely the investor, who is in charge of receiving the signal (Michael Spence, 1973). The theory of agency is a theory that describes the association between principals (shareholders/owners) and agents (managers). In fact, in the agency relationship, it is known that there is an agreement in which the principal gives authority to the agent to manage the business and make the best decision for the principal (Michael and William, 1976).

Profitability designates the company’s capacity to create profits during a certain period through all capabilities and resources from selling activities, asset utilization, and capital utilization (Hary, 2016). One of the indicators of profitability is the net profit margin, which is known as the return on sales and profit margin, which are considered as net profit (Robinson et al. 2015:181). Liquidity is the company’s capability to create sufficient corporate finance to meet short-term funding needs and liabilities(Rao, 2021:134).

Framework:

\[ H_1: \text{Profitability has a significant positive effect on earnings quality} \]
\[ H_2: \text{Liquidity has a significant positive effect on Earnings Quality} \]
\[ H_3: \text{Leverage significantly negatively affects Earnings Quality} \]
\[ H_4: \text{Company Size is able to strengthen the positive influence of the relationship between Profitability and Earning quality} \]
\[ H_5: \text{Company size is able to strengthen the positive influence of the relationship between Liquidity and Earning quality} \]
\[ H_6: \text{Company size weakens the negative influence of the relationship between Leverage and Earnings quality} \]

3. Methodology
This research applies quantitative research with secondary data from the annual reports of the Indonesia Stock Exchange and the Malaysian Stock Exchange on 2018-2021 Food and Beverage Sub-Sector Companies, with as many as 22 companies. Independent variables of profitability, liquidity and leverage. The dependent variables are earning quality and the company size as moderation variables. The study used linear regression of panel data with the support of Eviews12.
The measurement scales used are:

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Measurement</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Profitability (Robinson et al. 2015:181)</td>
<td>( \text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}} \times 100% )</td>
<td>Ratio</td>
</tr>
<tr>
<td>2</td>
<td>Liquidity (Rao, 2021:135)</td>
<td>( \text{CR} = \frac{\text{Current Asset}}{\text{Current Liability}} \times 100% )</td>
<td>Ratio</td>
</tr>
<tr>
<td>3</td>
<td>Leverage (Melicher and Norton, 2013:392)</td>
<td>( \text{DER} = \frac{\text{Current Liability}}{\text{Total Equity}} \times 100% )</td>
<td>Ratio</td>
</tr>
<tr>
<td>4</td>
<td>Earning Quality (Basioudis, 2019:263)</td>
<td>( \text{EQ} = \frac{\text{Cash Flow from Operation}}{\text{Net Income}} )</td>
<td>Ratio</td>
</tr>
<tr>
<td>5</td>
<td>Firm Size (Supriadi, 2020:129)</td>
<td>( \text{Firm Size} = \text{Ln} (\text{Total Asset}) )</td>
<td>Ratio</td>
</tr>
</tbody>
</table>

1. Descriptive statistical analysis
   Descriptive method that requires information regarding the data that has been collected and is not intended for hypothesis testing.

2. Panel Data Regression Model Estimation
   1) Fixed Effects Model (FEM)
   2) Common Effects Model (CEM)
   3) Random Effects Model (REM)

3. Metode Pemilihan Model Regresi Data Panel
   1) Chow Test
      This test is a test conducted to find out whether the model used is a fixed effects model or a common effects model.
   2) Hausman Test
      This test is applied to identify the model used, whether it is better to use the Random Effects Model (REM) or the Fixed Effects Model (FEM).
   3) Lagrange Multiplier Test
      This test is applied to identify the model used, whether it should use the Common Effects Model (CEM) or Random Effects Model (REM).

4. Test Classical Assumptions
   1) Multicollinearity Test
      Multicollinearity tests must be carried out in regressions that use at least two independent variables; this is to reveal whether there will be a mutually influencing relationship between the independent variables studied.
   2) Heteroskedasticity Test
      Heteroskedasticity testing needs to be performed to determine the presence or absence of variant inequality and residual panel data regression models.

5. Test the Hypothesis
   1) Test F (Model Feasibility)
      The F test is used to describe whether all the independent variables included in the model simultaneously have an effect on the dependent variable.
   2) R2 Test (Coefficient of Determination)
      The results of the R2 tests prove the extent to which the capacity of the regression model to reveal variations in the independent variable affects the dependent variable.
   3) Partial t-Test
      The results of the t-test reveal the significance of the independent variables individually affecting the dependent variable.

6. Moderated Regression Analysis (MRA)
   MRA is a special application for multiple linear regression because the regression equation has an interaction indicator, namely the multiplication between two or more independent variables.
   \[
   \text{GAAP ETR} = \alpha + \beta_1 \text{ROA} + \beta_2 \text{CR} + \beta_3 \text{DER} + \beta_4 \text{ROA} \times \text{SIZE} + \beta_5 \text{CR} \times \text{SIZE} + \beta_6 \text{DER} \times \text{SIZE} + \epsilon
   \]
4. Results and Discussion
From the research results of 22 companies with 88 data, the results of the descriptive statistical testing

<table>
<thead>
<tr>
<th>Table. Descriptive Statistics</th>
<th>ROA</th>
<th>CR</th>
<th>DER</th>
<th>SIZE</th>
<th>EQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.104773</td>
<td>2.611250</td>
<td>0.347386</td>
<td>2.161932</td>
<td>1.419659</td>
</tr>
<tr>
<td>Median</td>
<td>0.085000</td>
<td>2.195000</td>
<td>0.310000</td>
<td>1.380000</td>
<td>1.420000</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.350000</td>
<td>8.050000</td>
<td>0.810000</td>
<td>10.20000</td>
<td>3.480000</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.010000</td>
<td>0.590000</td>
<td>0.140000</td>
<td>0.430000</td>
<td>-1.790000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.066557</td>
<td>1.583861</td>
<td>0.178882</td>
<td>2.087952</td>
<td>0.864581</td>
</tr>
<tr>
<td>Observations</td>
<td>88</td>
<td>88</td>
<td>88</td>
<td>88</td>
<td>88</td>
</tr>
</tbody>
</table>

Source: Secondary data processed from Eviews12

The results of earning quality show that the Food and Beverage sub-sector company is able to generate an average net profit of 1.42, which comes from the company's operational utilization. The profitability results show that the Food and Beverage company is, on average, able to generate a net profit of 10%, which comes from the utilization of assets. The liquidity results show that the Food and Beverage company has an average of 26 times or 261% to cover current debt from current assets owned by the company. The results of leverage show that food and beverage companies, on average, have debts that are smaller than the company's capital because they are below the value of 1. The results of the company size show that the average Food and Beverage company is 2.161932 or IDR 2,161,932,000,000 per year.

**Test Results of the estimation test of the panel data regression model**

<table>
<thead>
<tr>
<th>Uji Model</th>
<th>Hasil Estimasi Model Regresi Data Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow Test</td>
<td>Common Effects Model (CEM)</td>
</tr>
<tr>
<td>Hausman Test</td>
<td>Random Effects Model (REM)</td>
</tr>
<tr>
<td>LM Test</td>
<td>Common Effects Model (CEM)</td>
</tr>
</tbody>
</table>

Source: Secondary data processed from Eviews12

From the estimation results of the panel data regression model, the best model estimate used is the Common Effects Model (CEM).

<table>
<thead>
<tr>
<th>Test Results Koefisien Determinasi (R²) and Test F (Simultan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
</tr>
<tr>
<td>S.E. of regression</td>
</tr>
<tr>
<td>Sum squared resid</td>
</tr>
<tr>
<td>Log likelihood</td>
</tr>
<tr>
<td>F-statistic</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
</tr>
</tbody>
</table>

Source: secondary data processed from Eviews12

As shown in the table above, the Adjusted R-Square value of 0.046749 or 4.67% was obtained. These results reveal the percentage of influence of the independent variable on the dependent variable of 4.67%, and the remaining 95.33% is affected by other variables outside the independent variables.

**4.1 F test results (Simultan)**
The F test was 2.06665, while in the F table, it was 2.71, which means that the F value is calculated < F table, with a probability value of 0.092535. Because the F value calculates the table < F and the probability value > 0.05, then it is concluded that the variables Return of Assets, Debt Equity Ratio, and Current Ratio simultaneously do not affect the quality of earnings or H₀ received.
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### T-test results (Partial)

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.450072</td>
<td>0.452499</td>
<td>3.204589</td>
<td>0.0019</td>
</tr>
<tr>
<td>ROA</td>
<td>-3.963666</td>
<td>1.471714</td>
<td>-2.693230</td>
<td>0.0086</td>
</tr>
<tr>
<td>CR</td>
<td>0.025028</td>
<td>0.087317</td>
<td>0.286635</td>
<td>0.7751</td>
</tr>
<tr>
<td>DER</td>
<td>0.656213</td>
<td>0.799389</td>
<td>0.820893</td>
<td>0.4141</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.042350</td>
<td>0.044152</td>
<td>0.959179</td>
<td>0.3403</td>
</tr>
</tbody>
</table>

Source: Secondary data processed from Eviews

T-statistic roa -2.693230 < 1.662, Prob value. Roa=0.0086 < 0.05, then partially influential. CR 0.286635 < 1.662, CR=0.7751 > 0.05. DER 0.820893 < 1.662, DER= 0.4141 > 0.05, then partially CR and DER have no effect.

### 4.2 Regression Analysis Moderating (MRA)

#### Test Results MRA ROA*SIZE-EQ Common Effects Model

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.258153</td>
<td>0.283342</td>
<td>4.440,401</td>
<td>0.0000</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.041811</td>
<td>2.231,880</td>
<td>-0.018734</td>
<td>0.9851</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.270988</td>
<td>0.120906</td>
<td>2.241,299</td>
<td>0.0276</td>
</tr>
<tr>
<td>M1</td>
<td>-1.721110</td>
<td>0.874299</td>
<td>-1.968561</td>
<td>0.0523</td>
</tr>
</tbody>
</table>

Source: Secondary data processed from Eviews

The probability value of M1 shows a result of 0.0523 and is at a position of > 0.05, meaning that the company size does not affect the correlations between profitability and earning quality. Companies with a higher or decreasing level of profitability do not affect the value of earning quality.

#### Test Results in MRA CR*SIZE-EQ Common Effects Model

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.393939</td>
<td>0.263719</td>
<td>5.285691</td>
<td>0.0000</td>
</tr>
<tr>
<td>CR</td>
<td>-0.014711</td>
<td>0.087763</td>
<td>-0.167620</td>
<td>0.8673</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.058683</td>
<td>0.097173</td>
<td>0.603901</td>
<td>0.5475</td>
</tr>
<tr>
<td>M2</td>
<td>-0.011735</td>
<td>0.037077</td>
<td>-0.316504</td>
<td>0.7524</td>
</tr>
</tbody>
</table>

Source: Secondary data processed from Eviews

The probability value of M2 obtained a result of 0.7524 and was in the position of > 0.05, meaning that the company size does not affect the correlations between liquidity and earning quality. Companies with higher or declining liquidity levels do not affect the value of earning quality.

#### Test Results MRA DER*SIZE-EQ Common Effects Model

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Koefisien</th>
<th>St. Kesalahan</th>
<th>t-Statistik</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.398352</td>
<td>0.290566</td>
<td>4.812,510</td>
<td>0.0000</td>
</tr>
<tr>
<td>DER</td>
<td>-0.110174</td>
<td>0.741104</td>
<td>-0.148662</td>
<td>0.8822</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.016339</td>
<td>0.099164</td>
<td>-0.164770</td>
<td>0.8695</td>
</tr>
<tr>
<td>M3</td>
<td>0.116802</td>
<td>0.215246</td>
<td>0.542643</td>
<td>0.5888</td>
</tr>
</tbody>
</table>

Source: Secondary data processed from Eviews

The probability value of M3 obtained a result of 0.5888 and was in the position of > 0.05, meaning that the company size does not affect the correlations between leverage and earning quality. Companies with increasing or decreasing Leverage levels do not affect the value of earning quality.
5. Conclusion
In this study, researchers want to analyze and find out the effect of profit quality variables on profitability, liquidity, and leverage variables with moderation of company size by looking at conditions in previous studies that show several different results. The results show that individual profitability significantly affects profit quality and simultaneously does not significantly affect profit quality in Food and Beverage subsector companies listed on the IDX and Bursa Malaysia in 2018 – 2021. Liquidity and leverage individually and simultaneously do not significantly affect the quality of profit in related companies. The size of the company cannot moderate the effect of the relationship of liquidity, profitability and leverage on the quality of profits of related companies.

This study aims to provide input to investors and academics to see how the influence of profit quality is influenced by variables of profitability, liquidity, leverage and company size as a moderation that can be used to determine decision making. Practically, it is able to assess early how the company’s track record is related from year to year and can see a summary of the company’s capabilities for subsequent accounting science. However, this study has limitations with insignificant results and does not moderate the variable of profit quality. Theoretical suggestions for future research are expected to continue the research period or may add years of research. The next researcher can also add or use other independent variables that will produce a positive influence on the quality of profits and the size of the company as moderation.

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