Conference Paper

The Analysis of Manufacturer Company’s Characteristics on Financial Disclosures and the Relation With Value Relevance

Melinda Malau

Accounting Program, Indonesian Christian University, Jakarta, Indonesia

Abstract

The disclosure published in firms’ annual report is a very important factor for stakeholders in the capital market. The quality and quantity of information are different between different firms. The objective of this research is to investigate whether the firm’s characteristic determines the level of disclosures of financial measures and to study whether financial measures information have value relevance to the investor. Using a sample of 100 manufacturing firms in 2015 and applying panel data analysis, this study reports that the firm’s characteristics such as size, age, regulated company, product life cycle and leverage have significant effect on the disclosure level of financial measures. This research’s result also shows that financial measures have value relevance to investor. The higher the disclosure of financial measures, the stronger the effect on the earnings-return relationship (measured by earnings response coefficient, ERC), implying that the informativeness of earnings and financial measures disclosure are complementary to each other.

Keywords: disclosure, financial measures, investor analysis, value relevance, earning response coefficient

1. Introduction

1.1. Background research

Disclosure is a very important factor for stakeholders in the capital market, which requires all companies listed on the Indonesian Stock Exchange (BEI) to publish annual report as a form of the responsibility’s company to the public. Disclosure also stipulate that the company to disclose information about financial measures in the annual report the company issued [10].

However, in fact the quality and quantity of information that disclosed in the annual report was different between the companies [14]. This resulted in difficulties for users...
to assess thoroughly and accurately about the company’s performance. At one of the research studies that improve the quality of disclosure is proven to increase stock liquidity for the company [18]. Accounting information is viewed as a measuring tool and as a provider of information remains relevant and the disclosure of accounting policies, including policies that have had an influence on the performance and value of companies [9].

A special relation with the value relevance for investors, not many academic studies that found adequate, especially with a sample of manufacturing firms in Indonesia. Scarcity is what research was conducted. This research was designed to investigate the characteristics of the manufacturing companies in depth in financial disclosure and their relation with the value relevance for investors.

1.2. Problem research

Based on the research background, the research problem is formulated as follows:

1. What is the relationship characteristics of manufacturing firms (size and age of the company, the level of debt ratio/leverage, regulated industries and product life cycles) of the financial measures disclosure level of a company?

2. What is the effect of disclosure level financial measures to the relevance value for investors?

1.3. Purposes and benefits research

Purposes of Research:

1. To analyze the characteristics of manufacturing companies (size and age of the company, the level of debt ratio/leverage, regulated industries and product life cycle) in relation to the level of disclosure financial measures a company.

2. To analyze the effect of disclosure level financial measures to the relevance value for investors.

Benefits of research:

For the development of science, research is expected to add to the treasures of the academic literature on disclosure to effect of disclosure level financial measures to the value relevance. For the Government is expected to be used as input for the Government in formulating regulations on the importance of applying the disclosure
policy of annual reports for listed companies. For the Indonesian Institute of Management Accountants (IAMl) is expected to assist management in improving the quality and quantity of financial measures disclosure in the annual report. For the Indonesian Institute of Accountant Public (IAPI) is expected to provide input to audit clients for more attention to the overall level of disclosure in the annual report. For the Financial Accounting Standards Board (DSAK) the results of this research can be a reference in providing technical standards related to the disclosure.

1.4. Significance of research

This research intends to broaden and deepen previous researches [1, 10, 14, 18] by reviewing financial disclosures and a term of one year (2015). In the research by Maaloul and Zeghal (2015) analyze the relationships between Financial Statement informativeness (FSI) and Intellectual Capital Disclosure (ICD). The implication of this research is to reinforce the role of the ICD voluntarily as a solution to reduce the problem of irregularities of financial information.

Research by Kang, Helen and Sidney Gray (2014) to investigate the quality of the segment disclosure in companies in Brazil, Russia, India and China (known as the BRIC economies) that extend the operational activities in the international sphere and to assess the extent of convergence with globally recognized standards, namely IFRS. The findings in this study indicate the extent of the disclosure by the majority of companies BRIC to a high standard with quantitative data and narrative.

Alsaeed et al. (2005) investigate the empirical evidence on the effect of corporate characteristics specified in the company’s financial disclosures. Eight hypotheses were formed to examine the relationship between the explanatory variables (name, industry type, listing status, return on equity, liquidity, market capitalization, foreign ownership, non-executive directors and the audit committee) and the expansion of the disclosures in the annual report. The results show the status of listings, industry type and size companies found significantly related to the level of disclosure.

This research includes most of the variables used in previous studies [14, 18] related to factors of firm characteristics that can determine the level of breadth of financial disclosure, adding a variable that has not been much considered and combined with characteristics of the company earlier in the study of financial disclosure and relation to the value relevance, for example, the product life cycle (PLC).
1.5. Restrictions research

This research intends to study in depth financial disclosures and a term of one year (one shoot). This study also includes most of the variables used in previous research related to factors of firm characteristics can determine the level of financial disclosure breadth and add a new variable that has not been considered in previous studies, the variable product life cycle. In addition, this study also examines the effect on the value relevance of financial disclosure.

2. Theoretical Framework

2.1. Agency theory

Agency theory is very influential in this research. Agency theory [8] assumes that each individual involved contracts aim to maximize their respective interests. If the individual acting alone to maximize its interests, then there will be conflict. Actions that are hidden will bring acts that violate or ethical (moral hazard) and the hidden information will arise the adverse selection.

2.2. Principles of disclosure

Based on an efficient market mechanism any company that applies the principle of full disclosure will get a positive reaction from the market to boost the share price and trading volume [15].

2.3. Assessment value relevance as an information

Research by Beaver (2002) concluded that the underlying concept of value relevance is basically to understand if investors provide value to information.

2.4. Conceptual framework

Conceptual framework of this research describes the relationship between the variables involved.
2.5. Prior literature research

2.5.1. The previous study on the effect of corporate characteristics on the level of disclosure

Table 1: Prior research disclosures in annual report.

<table>
<thead>
<tr>
<th>Title and Researcher</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Empirical Analysis of the Quality of Corporate Financial Disclosure [16].</td>
<td>Variable asset size of the company (asset size), number of shareholders (number of stockholders), recording status (listing status), the size of the Public Accountant (CPA Firms), rate of return and profit margins are positively correlated to the disclosure.</td>
</tr>
<tr>
<td>Disclosure in Published Annual Reports [17].</td>
<td>Variable types of industries and not the size of the company’s assets that can influence the quality level of disclosure.</td>
</tr>
<tr>
<td>The Impact of Size, Stock Market Listing and Industry Type on Disclosure in the Annual Report of Japanese Listed Corporation [3].</td>
<td>The research proves that the variable size of the company (in-proxy with eight variables: capital stock turnover, numbers of shareholders, total assets, current assets, fixed assets, shareholders’ funds and bank borrowing, listing status and type of industry) proved to have a significant effect on disclosure.</td>
</tr>
<tr>
<td>Cross Sectional Determinants of Analyst Rating of Corporate Disclosure [12].</td>
<td>The research proves that the level of disclosure is influenced by the performance of the company (in-proxy with stock returns), the asset size of the company, the relationship between stock returns and earnings and the issuance of securities.</td>
</tr>
<tr>
<td>The Association Between Firm-Specific Characteristics and Disclosure: The Case of Saudi Arabia [1]</td>
<td>The size of the company is significantly positively related to the level of disclosure. Debt, ownership, age of the company, profit margin, ROE, liquidity, firm size, industry type does not significantly explain the disclosure.</td>
</tr>
</tbody>
</table>

Source: prepared by the author based on previous research.
2.5.2. Prior research has linked the effect of corporate disclosure of the value relevance

The research by Beaver (2002) and Wondabio (2005) proved that the underlying concept of value relevance is basically to investigate if investors provide value to an information. Research Louis (2003) proved that foreign translation adjustment significantly influence the company’s stock price. Gelb Research and Zarowin (2002) regarding the corporate disclosure policy to the informativeness of stock prices to conclude that the higher the level the more informative corporate disclosure on stock prices of companies in the future (by the Earnings Response Coefficient higher in future).

2.6. Research hypothesis

It can be seen the relationship between the independent variables that affect the extent of disclosure level, for example, financial measurements and the influence of the disclosure level of the value relevance.

2.6.1. Research hypothesis characteristics influence on corporate financial disclosure

Independent variables that predicted may affect the financial disclosure and explanation is as follows:

1. **Company Size**

   Research conducted proves that large companies will present disclosure broader than the small companies to minimize the possibility of stress [1, 3, 16]. Based on the explanation, the research hypothesis as follows:

   \[ H_1: \text{The size companies positive effect on the level of disclosure of a company.} \]

2. **Company Age**

   According Alsaeed (2005) companies with a longer life experience knows the needs of the stakeholders.

   \[ H_2: \text{Age companies positive effect on the level of disclosure of financial information of an enterprise.} \]

3. **Level of Debt Ratios (Leverage)**
The level of debt (leverage) is very important to assess the ability of a company to pay off all debts. Variable leverage significant effect on disclosure in previous research [5].

\[ H_3: \text{The level of debt (leverage) positive effect on the disclosure of information.} \]

4. **Regulated Industry**

Companies that are in a regulated industry will surely disclose more information than the companies that are not in regulated industries. Research hypothesis is as follows:

\[ H_4: \text{Regulated industries positive effect on the level of corporate disclosure.} \]

5. **Product life cycle**

Companies with a long product life cycle is more likely to use the measurement of total disclosure and financial measures when compared the companies with a short product life cycle. Research by Kaplan and Norton (2001) state industrial short-lived products or services are more competitive.

\[ H_5: \text{Product Life Cycle affects the level of disclosure of financial information of an enterprise.} \]

2.6.2. **Hypothesis development research of disclosure relationships value relevance**

Testing the hypothesis of this study is to assess whether disclosure of a company’s value has relevance to the investor measured by ERC. Previous research Ittner and Larcker (2003) prove that the disclosure of non-financial measures have a relevance value to the investor.

\[ H_6: \text{The level of disclosure T_DISC have relevance for investors value as measured by the ERC.} \]

3. **Research Methodology**

3.1. **Population and sampling**

The population in this research are all manufacturing companies listed in Indonesia Stock Exchange (BEI) in 2015 with the following criteria:
a. The Company publishes an annual report in 2015 and was fully operational during the year.

b. The manufacturing company never did delisting from the Stock Exchange, does not stop the activity, not to halt operations at the stock market, don’t a merger and does not change the status of the industry during 2015.

c. The company data needed for this study are available. The research is secondary data, for example, (i) the issuer’s website for the annual report and audited financial statements, (ii) website Damodaran for the data market risk premium in Indonesia, (iii) the IDX website for stock prices, index shares, the audited financial statements and annual reports, (iv) Indonesian Capital Market Directory summary financial data issuers and other market information, (v) website yahoo finance for individual stock price data and IHSG as a comparison.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of companies:</td>
<td>XXX</td>
</tr>
<tr>
<td>Year 2015</td>
<td>XXX</td>
</tr>
<tr>
<td>(Companies that have merged)</td>
<td>(XXX)</td>
</tr>
<tr>
<td>(Companies with negative equity)</td>
<td>(XXX)</td>
</tr>
<tr>
<td>(Data Incomplete)</td>
<td>(XXX)</td>
</tr>
<tr>
<td>Total sample</td>
<td>XXX</td>
</tr>
</tbody>
</table>

Source: processed by author.

3.2. Types and sources of data

The data used in this research is secondary data or indirect data. For sources of secondary data obtained from the Indonesia Stock Exchange (IDX) which publishes the financial statements in the period in 2015.

3.3. Summary variable operationalization

3.4. Research model
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Disclosure</td>
<td>Level of disclosure measured by scoring using a list of disclosure items.</td>
<td>Ratio</td>
</tr>
<tr>
<td>Financial Measures</td>
<td>Financial measures disclosure level of both mandatory and voluntary. Measured by scoring using a list of disclosure items.</td>
<td>Ratio</td>
</tr>
<tr>
<td>LOGTA</td>
<td>Companies'size as measured by the logarithm of total assets at the end of the year</td>
<td>Ratio</td>
</tr>
<tr>
<td>AGE</td>
<td>Age of each company was calculated by the number of years since its foundation.</td>
<td>Ordinal</td>
</tr>
<tr>
<td>REG</td>
<td>Dummy variable that the value 1 when the company is in a regulated industry and 0 if other.</td>
<td>Nominal</td>
</tr>
<tr>
<td>LEV</td>
<td>Ratio total debt to total assets</td>
<td>Ratio</td>
</tr>
<tr>
<td>PLC</td>
<td>Dummy variable that the value 1 for the long product life cycle long and 0 for the short PLC</td>
<td>Nominal</td>
</tr>
</tbody>
</table>

Source: processed by author

3.4.1. The model examines the relationship between firm size, firm age, the level of debt ratio, regulated industries and product life cycle on financial disclosure

\[ T\_DISC = \beta_0 + \beta_1 LOGTA + \beta_2 AGE + \beta_3 LEV + \beta_4 REG + \beta_5 PLC + \epsilon \]

Description:
- **T\_DISC**: Total Disclosure
- **REG**: Regulated Industry
- **LOGTA**: Size of company
- **AGE**: Age of company
- **PLC**: Product Life Cycle
- **LEV**: Leverage/total debt to total assets

3.4.2. Model is regressing CAR with UE variable and Financial Measures as control variable and their interaction

\[ CAR = \beta_0 + \beta_1 UE + \beta_2 BETA + \beta_3 PBV + \beta_4 LOGTA + \beta_5 T\_DISC + \beta_6 UE \times BETA + \beta_7 UE \times PBV + \beta_8 UE \times LOGTA + \beta_9 UE \times T\_DISC + \epsilon \]

Description:
The 2nd ICVHE

T_DISC = Total Disclosure.
REG = Regulated Industry
PLC = Product Life Cycle
LOGTA = Size of company
AGE = Age of company
ε = Error term
LEV = Leverage/total debt to total assets
PBV = Price to Book Value Ratio
UE*PBV = Interaction UE and PBV variable.
UE*T_DISC = Interaction UE dan total disclosure variable
BETA = Beta koreksi yang dihitung dengan menggunakan teori market model dengan rumus $R_i = a + \beta\cdot R_m$.

3.5. Variable measurement

Dependent variable based on research model, for example, (i) disclosure annual report that publish by company, (ii) value relevance.

3.5.1. Index disclosure financial measures

Financial measures disclosure is measured by scoring using a list of disclosure items. Index disclosure is applied to each of the industries according to the classification Indonesian Capital Market Directory (ICMD).

Disclosure is derived from several sources related to: (i) a survey of financial and non-financial measures by Dempsey et al. (1997), (ii) research Said et al. (2003), (iii) disclosure items used in research on good corporate finance disclosure according to the conditions in Indonesia.

In determining the value of content analysis of disclosure in the annual report the company to value 1 if disclosed and the value 0 if it is not disclosed (dummy variable). For calculation formula Financial Measures disclosure is as follows:

$$T_{DISC_{ij}} = \frac{\sum X_{ij}}{n_j}$$

Description:
Level of disclosure $T_{DISC}$ amounted to 100% ($0 \leq T_{DISC} \leq 1$).
The Total Disclosure Index (TDISC) is used to measure financial disclosure based on the industry. The disclosure index of company j is calculated as follows: 

\[ T_{\text{DISC}}_{ij} = \frac{\text{Total Disclosure Index for company } j}{\text{total number of items for company } j} \]

where, 

- \( X_{ij} \) is a dummy variable, with value 1 if item i is disclosed and 0 if item i is not disclosed.

### 3.5.2. Cumulative Abnormal Return (CAR)

Abnormal return or excess return is the excess of the return really going to the normal return. Normal return is the expected return. The normal return is calculated by the following equation:

\[ \text{AR}_{it} = R_{it} - R_{mt} \]  

(1)

Formula for calculation of abnormal return (AR) are as follows:

\[ R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}} \]  

(2)

\[ R_{mt} = \frac{\text{IHSG}_t - \text{IHSG}_{t-1}}{\text{IHSG}_{t-1}} \]  

(3)

\[ \AR_{it} = \text{Abnormal return for company } i \text{ in period } t \]

\[ P_{it} = \text{Stock price company } i \text{ in period } t \]

\[ R_{mt} = \text{Return market index in period } t \]

\[ P_{it-1} = \text{Stock price company } i \text{ in period } t-1 \]

\[ \text{IHSG}_{t-1} = \text{Composite Stock Price Index in period } t-1. \]

\[ R_{it} = \text{Return actually happened to firm } i \text{ in period } t. \]

Cumulative Abnormal Return (CAR) is the total of the abnormal return during a year that calculated based on (4.1). According to Scott (2015), the ERC is to measure changes in abnormal returns of securities as a response to the unexpected earnings of the companies that issue securities with formula:

\[ \text{CAR}_{it} = a + b \text{UE}_{it} + e \]  

(4)

Description: \( \text{CAR}_{it} = \text{Cumulative Abnormal Return Company } i \text{ period } t \)

- \( b = \text{Earnings Response Coefficient (ERC).} \)

\[ \text{UE}_{it} = \text{Unexpected earnings by formulated are as follow:} \]

\[ \text{UE}_{it} = \frac{(\text{EPS}_{it} - \text{EPS}_{it-1})}{P_{it-1}} \]

Description Unexpected Earnings (UE) are as follow:

\[ \text{EPS}_{it} = \text{Earnings per share for company } i \text{ in period } t. \]
The Independent Variables

The independent variables to be tested to determine its relationship with the dependent variable based on the models of these research, for example, the size of the company, company age that the company was established, the level of debt ratio, regulated industries and product life cycles.

3.6. Techniques of data analysis

3.6.1. Analysis of research model

This research investigate the descriptive statistics of each variable and its correlation with other variables. For the variance and coefficients of covariance derived from processing Eviews. T statistics were compared with t table with degrees of freedom of n – k, where n is the total number of samples and k is the number of parameters to be estimated.

3.6.2. Testing of diagnostic statistics

This research diagnostic statistic, for example, normality test and classical assumption test, including tests of multicollinearity, heteroscedasticity and autocorrelation.

4. The Results and Discussion

4.1. Inspection data

Variables data are taken from the annual report. Accounting data of specific companies is not complete, can be taken directly from the source or from ICMD.

4.1.1. Normality test

Normality test can be filled with a number of observations of 100 manufacturing companies that exceed the standards of the central limit theorem (n > 30). Other classical assumption test was not performed because the statistical analysis method used in this research is data panel.
4.2. Analysis of descriptive statistics research variable of total disclosure

The following are the test results of panel data and statistical analysis to the research model as follows.

\[ T_{DISC} = \beta_0 + \beta_1 \text{LOGTA} + \beta_2 \text{AGE} + \beta_3 \text{LEV} + \beta_4 \text{REG} + \beta_5 \text{PLC} + \epsilon \]

**Table 4: Output estimation results.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>23.36956</td>
<td>5.489896</td>
<td>4.256831</td>
<td>0.0000</td>
</tr>
<tr>
<td>LOGTA</td>
<td>1.43E-08</td>
<td>2.07E-08</td>
<td>0.687578</td>
<td>0.4934</td>
</tr>
<tr>
<td>AGE</td>
<td>-0.194642</td>
<td>0.117873</td>
<td>-1.651275</td>
<td>0.1020</td>
</tr>
<tr>
<td>LEV</td>
<td>2.709125</td>
<td>4.061069</td>
<td>0.667097</td>
<td>0.5063</td>
</tr>
<tr>
<td>REG</td>
<td>71.99321</td>
<td>6.484993</td>
<td>11.10151</td>
<td>0.0000</td>
</tr>
<tr>
<td>PLC</td>
<td>25.26289</td>
<td>5.178216</td>
<td>4.878686</td>
<td>0.0000</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.616545</td>
<td></td>
<td></td>
<td>50.5000</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.596149</td>
<td>S.D. dependent var</td>
<td>29.01149</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>18.43660</td>
<td>Akaike info criterion</td>
<td>8.724677</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>31951.37</td>
<td>Schwarz criterion</td>
<td>8.880987</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-430.2339</td>
<td>Hannan-Quinn criter.</td>
<td>8.787939</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>30.22795</td>
<td>Durbin-Watson stat</td>
<td>0.156379</td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Financial Statement from www.idx.co.id, processed by author

Multiple Linear Regression equation:

\[ Y = 23.36956 + 1.43X1 - 0.194642X2 + 2.709125X3 + 71.99321X4 + 25.26289X5 + \mu. \]

Constants of 23.36956 indicate if the independent variables X1, X2, X3, X4 and X5 are considered constant, the average price of logs amounted to 23.36956.

4.2.1. Coefficient of determination

Output shows the adjusted R-squared of 0.596149, which means five independent variables X1, X2, X3, X4 and X5 are able to explain 59.61% variation of the variable.
Y (total disclosure). So, the regression model is good, while the remaining 40.39% is explained by other variables not research.

4.2.2. Simultaneous significance test (Test statistic F)

Output shows the value of $F$ statistic 30.22795 with probability 0.0000 because the probability below 0.05 it can be concluded that the five independent variables $X_1$, $X_2$, $X_3$, $X_4$ and $X_5$ simultaneously effect on $Y$.

4.2.3. Individual parameter significance tests (Test statistic t)

Results of $t$-test statistics show that the industry is regulated independent variables (REG) and product life cycle (PLC) which $X_4$ and $X_5$ effect on total disclosure ($Y$) with a significance value below 0.05.

4.2.4. Classical assumption test multicollinearity

<table>
<thead>
<tr>
<th></th>
<th>LOGTA</th>
<th>AGE</th>
<th>LEV</th>
<th>REG</th>
<th>PLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOGTA</td>
<td>1</td>
<td>0.528117</td>
<td>0.094776</td>
<td>0.329068</td>
<td>-0.216125</td>
</tr>
<tr>
<td>AGE</td>
<td>0.528117</td>
<td>1</td>
<td>0.095374</td>
<td>0.361616</td>
<td>-0.108724</td>
</tr>
<tr>
<td>LEV</td>
<td>0.094776</td>
<td>0.095374</td>
<td>1</td>
<td>-0.049625</td>
<td>0.077332</td>
</tr>
<tr>
<td>REG</td>
<td>0.329068</td>
<td>0.361616</td>
<td>-0.049625</td>
<td>1</td>
<td>-0.664196</td>
</tr>
<tr>
<td>PLC</td>
<td>-0.216125</td>
<td>-0.108724</td>
<td>0.077332</td>
<td>-0.664196</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Financial Statement from www.idx.co.id, processed by author

Interpretation is no correlation between the independent variables were high above 0.70. So researcher can conclude there is no multicollinearity between independent variables.

4.2.5. Classical assumption test heteroscedasticity

Results of heteroscedasticity test can be show in the following table.

The interpretation is that it can be concluded that Glejser test indicates heteroscedasticity in the model.
4.2.6. Classical assumption test autocorrelation

**Table 6:** Classical assumption test results heteroscedasticity.

<table>
<thead>
<tr>
<th>Test statistic</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.616545</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.596149</td>
</tr>
<tr>
<td>F-statistic</td>
<td>30.22795</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000000</td>
</tr>
</tbody>
</table>

Source: Financial Statement from www.idx.co.id, processed by author.

4.2.6. Classical assumption test autocorrelation

**Table 7:** Test results autocorrelation (Breusch–Godfrey Serial Correlation LM Test).

<table>
<thead>
<tr>
<th>Test statistic</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>225.0201</td>
</tr>
<tr>
<td>Obs*R-squared</td>
<td>83.02709</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.830271</td>
</tr>
<tr>
<td>Prob. F(2,92)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Prob. Chi-Square(2)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Mean dependent var</td>
<td>2.84E-16</td>
</tr>
<tr>
<td>Durbin–Watson stat</td>
<td>0.156379</td>
</tr>
</tbody>
</table>

Source: Financial Statement from www.idx.co.id, processed by author.

Interpretation of the results is LM test the hypothesis proposed in LM test consists of: (1) Ho: no autocorrelation, (2) Ha: no autocorrelation. The test results indicate that the autocorrelation LM indicated value Obs * R-squared is statistically significant ($p = 0.0000$).

4.2.7. Normality test

**Figure 2:** Normality test results. Source: Financial Statement from www.idx.co.id, processed by author.

The interpretation is the Jarque–Bera value of 8.562927 and significant with $p$-value of 0.013822. Therefore, it can be concluded Ho stating that the residuals are normally distributed can be rejected. In other words, assuming normally distributed residuals are not fulfilled.
4.3. Analysis descriptive statistics variable CAR

The following are the test results of panel data and statistical analysis to the research model as follows:

\[ CAR = \beta_0 + \beta_1 UE + \beta_2 BETA + \beta_3 PBV + \beta_4 LOGTA + \beta_5 T\_DISC \]
\[ + \beta_6 UE \ast BETA + \beta_7 UE \ast PBV + \beta_8 UE \ast LOGTA + \beta_9 UE \ast T\_DISC + \epsilon \]

<table>
<thead>
<tr>
<th>Table 8: Output estimation results CAR.</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>Mean dependent var</td>
</tr>
<tr>
<td>S.D. dependent var</td>
</tr>
<tr>
<td>Sum squared resid</td>
</tr>
</tbody>
</table>

Source: Financial Statement from www.idx.co.id, processed by author

Interpretation:

Multiple Linear Regression Equation:

\[ Y = -1.42 + 3.97X_1 - 2.82X_2 - 1.24X_3 + 4.52X_4 + 1X_5 - 1.3X_6 - 7.22X_7 - 2.74X_8 - 3.1X_9 + \mu. \]

Constants of -1.42 indicates if the independent variables X1, X2, X3, X4, X5, X6, X7, X8 and X9 are considered constant, the average log price amounted to -1.42.

4.3.1. Coefficient of determination

Output display shows the adjusted R-squared value of 1.00, which means a variation of nine independent variables are able to explain a 100% variation of the variable Y (CAR).

4.3.2. Simultaneous significance test (Test statistic F)

Nine independent variables X1, X2, X3, X4, X5, X6, X7, X8 and X9 simultaneously effect on Y.
4.3.3. Individual parameter significance test (Test statistic t)

Statistical $t$ test results showed the independent variables $UE,T\_DISC$, $UE\_BETA$, $UE\_PBV$, $UE\_LOGTA$, $UE\_T\_DISC$ ($X_1$, $X_4$, $X_5$, $X_6$, $X_7$, $X_8$, $X_9$) affects $CAR$ ($Y$) with a significance value below 0.05.

4.3.4. Classical assumption test multicollinearity

Based on the results can be concluded there is multicollinearity between several independent variables.

4.3.5. Classical assumption test heteroscedasticity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.691563</td>
<td>Mean dependent var</td>
<td>1.77E-13</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.660719</td>
<td>S.D. dependent var</td>
<td>2.63E-13</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>1.53E-13</td>
<td>Sum squared resid</td>
<td>2.11E-24</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>22.42152</td>
<td>Durbin–Watson stat</td>
<td>2.023181</td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Financial Statement from www.idx.co.id, processed by author.

The interpretation is the result of the output display shows that there are significant variables 0.05, for example, $X_3$, $X_4$, $X_5$, $X_8$ that indicate that there heteroscedasticity.

4.3.6. Classical assumption test autocorrelation

<table>
<thead>
<tr>
<th>$F$-statistic</th>
<th>169189.9</th>
<th>Prob. F(2.88)</th>
<th>0.0000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs*R-squared</td>
<td>99.97400</td>
<td>Prob. Chi-Square(2)</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Financial Statement from www.idx.co.id, processed by author.
The 2nd ICVHE

LM interpretation of test results is as follows:

The hypothesis of LM test are: (1) Ho: no autocorrelation, (2) Ha: no autocorrelation. The test results indicate no autocorrelation LM indicated by the value Obs * R-squared is statistically the value of \( p = 0.0000 \). conclusion, Ho is rejected.

Normality test

![Figure 3: Normality test results. Source: Financial Statement from www.idx.co.id, processed by author.](image)

The interpretation is the Jarque–Bera value of 1158.655 and significant with \( p \)-value of 0.0000. Therefore, it can be concluded Ho stating that the residuals are normally distributed can be rejected.

5. Conclusions, Contributions (Implications), Limitations of Research and Suggestions for Further Research

5.1. Conclusion

Based on test results, it can be concluded as follows:

1. Weight of compliance with the disclosure amounted to 0.596149 (59.61\%). Government as regulator should consider giving enforcement to issuers that do not comply with the mandatory disclosure and rewards to voluntary disclose more issuers to investors.

2. Results of research on the influence of the characteristics of manufacturing companies on the level of disclosure: the size of the company’s proven to affect the level of financial disclosure, the age of the company proved to have an influence on the level of financial disclosure. The more mature the company more financial disclosure, the level of debt ratios are not shown to have an influence on the level of financial disclosure, regulated industries proven to have an influence on the level of financial disclosure. Companies that have more regulations disclose
financial information, the industry producing the product/service short-lived is a competitive industry, so companies in this industry more attention to the disclosure to be easily absorbed by the market.

3. Growth Companies (PBV) shown to affect the level of financial disclosure. Companies that have a growth ratio (PBV) high will be more revealing information to the market to increase the company’s value.

5.2. Contributions (implications) research

The results of this study contribute as follows.

1. For the development of science, this research used observational study of one year (2015) to emphasize the consistency of research data about the disclosure which can be analyzed the influence of the consistency.

2. For the Government, the level of disclosure of listed companies in Indonesia Stock Exchange (BEI) is quite high. The issuers need to improve the disclosure of the annual report as an important information for investors. For IAMI expected more instrumental in helping the company to improve the quality and quantity of disclosure. For IAPI expected to further provide input to audit clients for more attention to the level of annual financial disclosure reports.

5.3. Limitations of research

The limitations that can be refined in the next research are:

1. Assessment (scoring) the level of disclosure using criteria 1 to be disclosed and 0 if it is not disclosed. This assessment has not considered based on the information in the order of priority importance of financial disclosure items.

2. This research only uses three control variables that influence the ERC, for example, beta (as a proxy for risk), PBV (as a proxy for growth opportunities) and total assets (as a proxy for the size of the company).

5.4. Suggestions for further research

Suggestions for the improvement of future research are as follows.
1. Giving scoring for financial assessment needs to be distinguished without or with weighting. This difference can be seen from the order of priority importance of an item of disclosure.

2. The control variables that influence the ERC needs to be added, for example the level of debt (leverage), persistence and quality of earnings, and other variables.

References


