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Voluntary Disclosure, Earnings Response Coefficient, and Earnings Persistence

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ABSTRACT

One of management credibility aspect showed by extent voluntary information disclosed. Management who more credible do more voluntary disclosure. Management use voluntary disclosure as tools to inform good signal happening to all stakeholders, include good earnings quality. This study examine the association of voluntary disclosure to earnings response coefficient (ERC) and earning persistence as earnings qualities attributes. Study uses 274 samples of listed firms across different industries in Indonesia, excluding financial industry for the financial period 2015. Ordinary least square (OLS) cross-sectional method is implemented to test the research hypotheses. The results of hypothesis test of the study exhibit a significant negative association between voluntary disclosure to ERC. This study also found no association statistically between voluntary disclosure to earnings persistence. The study also conducted additional testing of disclosures based on disclosure criteria. This test was conducted to determine the type of voluntary disclosure that has a significant influence on the dependent variable of the study, ERC and earnings persistence. This research conducted for one period, so for future research should to extent year observations.

KEYWORDS: Earnings Persistence; Earnings Responses Coefficient; Voluntary Disclosure

INTRODUCTION

Previous research related to the determinants of the extent of voluntary disclosure has been conducted, including Chakroun & Matoussi (2012); Nie *et al.* (2016); Lu (2018); Zaini *et al.* (2018) and Noh *et al.* (2019). Chakroun & Matoussi (2012) state that the extent of voluntary disclosure able to encourage capital market efficiency. The extent of voluntary disclosure also improve investor's responses to earnings announcement (Lu, 2018). Other similar studies that examine the benefits of voluntary disclosure are Chung *et al.* (2015); Plumlee *et al.* (2015) and Schoenfeld (2017).

Ji *et al.* (2017) analyzed the effect of voluntary disclosure on earnings quality. Firms with the extent voluntary disclosure incline their earnings quality. Dechow *et al.* (2010) describes several earnings quality proxies, where each proxy has different consequences. This study analyzes the effect of voluntary disclosure on earnings response coefficient (ERC) and earnings persistence. ERC measures the value of earnings quality based on investor responses (Dechow *et al.*, 2010), while earnings persistence is a earnings quality attribute that is related to good profit consistency. Previous research related to impact of voluntary disclosure and earnings quality has been conducted by Lassad & Khamoussi (2012); Dewi (2015); Fernando *et al.* (2018) and Karajeh (2019).

This study specifically analyzes the extensive association of voluntary disclosure to investor response to earnings (ERC). Widiastuti (2016) conducted a study of the effect of company disclosure policies on earnings information. The firm's disclosure proxy is assessed based on the disclosure by content analysis on annual report. Meanwhile, earnings information is assessed based on the level of ERC. Wider disclosure information affects believe investors. Widiastuti (2016) conclude there is negative significant correlation between voluntrary disclosure and ERC.

Furthermore, this study also examines the association between voluntary disclosure and earnings sustainability by means of earnings persistence. The high level of information disclosed gives a signal of good news that the firms aspire to convey to external parties, especially investors Basu (1997). Good news disclosure is related to firm's historical performance, therefore the extent of information has a non-significant influence on firm performance disclosure period (Li & Lin, 2005). This study examines the association of voluntary disclosure to future performance based on the level of earnings persistence in the following period. The extent of voluntary disclosure also exhibits the firm's commitment to reduce information asymmetry between management and investors. This view encourages companies to have stable sales growth, so sales volatility decreases (Lassad & Khamoussi, 2012). It can be concluded that firms with extensive disclosures have more persistent earnings.

The analysis of this study uses 274 companies listed on the Indonesia Stock Exchange. This study examines the extent of voluntary disclosure for one year. Consideration of research, company disclosures tend to remain every period. As Healy & Palepu (1993) who identified disclosures based on the AIMR disclosure ranking in 595 of 23 industries during 1980-1990, found that voluntary disclosure was non-free. The hypothesis of the research is tested by using regression analysis of ordinary least square (OLS) cross-sectional method.

This study found that the extent of voluntary disclosure had a significant negative influence on ERC. Another finding in this study is that there is no association between the extent of voluntary disclosure to earnings persistence. Additional testing is conducted to measure the association of voluntary disclosure of each criterion to the ERC and earnings persistence.

Based on the tests conducted, not all voluntary disclosure criteria have a significant effect on ERC.

The contribution of this study is the extent of voluntary disclosures delivered in annual reports is not able to influence the level of persistence of company profits. However, the output of the information conveyed can affect profit informativeness for investors in making investment decisions

Disclosure of company information plays a role in improving the efficiency of stock market functions (Chakroun & Matoussi, 2012). Voluntary disclosure is one of company disclosure type. Shi *et al.* (2012) define voluntary disclosure as disclosure of information that is not regulated by applicable standards. Empirical studies conducted by Chung *et al.* (2015) reveal that voluntary disclosure can reduce the level of information asymmetry. This reducement occurs because information disclosure encourages enhanced corporate transparency (Chung *et al.*, 2015). Lassad & Khamoussi (2012) states that without disclosure of information, investors are unable to assess the quality of shares. It means company disclosure improve investor decisions. This indicates that investors will tend to change their beliefs about the value of the company if full diclosure exist. Based on signaling theory, the company will provide positive information to investors through company disclosure (Whiting & Miller, 2008) when good things happen, include good earnings quality. Management hopes that these signals can be interpreted well by investors (Brealey *et al.*, 1977). Social norm theory also demonstrates that extant voluntary disclosure indicate how company build pattern of ethical value (Romer, 1984). Company that disclose more tend more ethical, include earnings quality persentations. Accordingly, the study will empirical test relations between voluntary disclosure and earnings quality.

This study utilizes ERC proxy and earnings persistence in calculating the level of earnings quality, as in the study of Dechow *et al.* (2010). First, this study considers the quality of earnings based on investor responses to earnings information (ERC). Beaver (1998) defines ERC as the sensitivity coefficient of stock prices changes to changes in accounting earnings. Scott & O'Brien (2003) defines ERC as an extension to measure the value of abnormal returns as a result of unexpected earnings reported by the company. Empirical research conducted by Widiastuti (2016) concludes that the broader voluntary disclosure improves the level of stock price information, which is indicated by the ERC value. The amount of positive information conveyed by the company influences positive changes in stock prices (Malek, 2016) as evidence of a reaction from investors. Dewi (2015) assessed investors' reactions to disclosures delivered by companies measured through ERC. Extensive disclosure of information influences the changes in investor confidence in the company. It can be concluded that the extent of voluntary disclosure decreases informational profitability. This is due to investors tend to consider voluntary information delivered by management. Therefore, the first hypothesis of this study is voluntary disclosure has a significant negative effect on ERC.

H_1: *Voluntary disclosure has a significant negative effect on ERC*

Second, this study analyzes the association of the extent of voluntary disclosure to earnings persistence. Scott & O'Brien (2003) defines earnings persistence as a revision of expected earnings in the future (expected future earnings) through the performance of the current period. Likewise with Penman (2013) persistence of earnings can reflect the sustainability of earnings (earnings sustainability). Dechow *et al.* (2010) stated that the high quality of earnings is reflected in how much the company's operating performance is able to become a future performance indicator. Dechow *et al.* (2010) earnings that are considered has a

high quality incline to be permanent. Management will attempt to maintain the level of persistence of profits because it affects the company's reputation for investors. This means that the high quality of earnings can be reflected in the high persistence of earnings (Dechow *et al.*, 2010). Persistent earnings tend to cause low levels of earnings fluctuations, so companies are able to maintain earnings in the previous period (Abedini, et al, 2013).

Li & Lin (2005) revealed the existence of a positive association of readability of report information to persistent earnings, where disclosure of reports as a measure of information readability. Lassad & Khamoussi (2012) also analyzed the association between information disclosed by the company and earnings persistence. The study found that disclosure of corporate social responsibility has a positive effect on persistence earnings. Voluntary disclosure can be an indicator of investors' presence of good news or bad news related to company performance (Basu, 1997). Companies tend to expand information revealed to signal to investors that there is good news. Disclosure of information in annual reports in the form of past performance causes the extent of information does not have a significant impact on the performance of the reporting period (Li & Lin, 2005). Therefore, this study examines the association of voluntary disclosure to future performance with a proxy for earnings persistence. The research hypothesis is that the extent of voluntary disclosure information encourages the high persistence of corporate profits.

H_2: *Voluntary disclosure has a significant positive effect on earnings persistence*

METHOD

The study population is all companies listed on the Indonesia Stock Exchange (IDX) which are also included in the 2015 ORBIS database. This study uses secondary data obtained from annual reports to calculate voluntary disclosure indices. All required financial data is obtained from the ORBIS database. IHSG data (Composite Stock Price Index) to calculate the company's actual returns obtained from yahoofinance.com. Research does not involve the financial industry because of differences in policies in the submission of annual reports. This research also eliminates companies that do not have the financial information needed. Based on these criteria, the total study sample was 274 companies. The following is a sample distribution based on the ORBIS Standard Industry Classification (SIC).

The independent variable of the study is voluntary disclosure. The extent of voluntary disclosure is measured by a list of voluntary disclosures used by Ferguson *et al.* (2002) and (2008) and Francis *et al.* (2008). This study eliminates the list of voluntary disclosures included in mandatory disclosure based on Kep. Bapepam Number 431/BL/2012.

Table 1. Company Sample Distribution

SIC	Freq,	Percent.	Cumulative
0	13	4.74%	4.74%
1	40	14.6%	19.34%
2	81	29.56%	48.91%
3	56	20.44%	69.34%
4	35	12.77%	82.12%
5	25	9.46%	91.61%
7	19	6.93%	98.54%
8	4	1.46%	100%
	274	100%	

The results of voluntary disclosures are calculated by summing the weight of the disclosures delivered, score 1 if the disclosure index is submitted in the annual report and score 0 for the opposite (Ferguson *et al.*, 2002). For detail operational and control variable measurement is presented in Appendix A.

The dependent variable of this study is ERC and earnings persistence. Earnings Response Coefficient (ERC) is a coefficient that reflects investor response to earnings information. Mathematically, ERC values can be calculated based on the formula in Lev's (1989) study, namely the value of the cumulative abnormal return (CAR) regression coefficient on unexpected earnings (EU).

Earnings persistence is a profit information capability that can reflect earnings sustainability in the future (Penman, 2013). Proxies to measure earnings persistence of this study are based on research by Francis *et al.* (2008); Dechow *et al.* (2010); Mahjoub & Khamoussi (2013) namely negative coefficients of the autoregressive model of earnings per share.

There are several variables affecting the persistence of earnings and the market response to earnings information (ERC) in previous studies. This study controls these variables to avoid research bias. Control variables to examine the extensive association of voluntary disclosure to ERC, namely: company size (SIZE), debt level (LEV), price to book value (PBV, proxy growth opportunities), and negative profit (LOSS). Hohenfels (2016); Hosseini *et al.* (2016); Lobo *et al.* (2017) found a positive association between firm size and ERC. The high level of debt of the company encourages systemic risk of investment, so the level of debt has a negative impact on the ERC (Hohenfels, 2016). Collins and Kothari (1989) found a positive association between growth opportunities to the rate of return on shares and company profits. Lee & Yoon (2012); Hosseini *et al.* (2016) control growth opportunities to examine the effect of independent variables on market response. Hosseini *et al.* (2016); Lobo *et al.* (2017) control negative earnings by predicting the negative influence between loss and ERC.

Control variables that test the association of voluntary disclosure to earnings persistence in this study are company size (SIZE), debt level (LEV), sales growth (GWTH), negative profit (LOSS), cash flow volatility (VAK) and accrual value (ACC). Research by Lee & Yoon (2012); Hsu & Hu (2016) and Bolmiri *et al.* (2016) control the size of the company and the level of debt in analyzing the association of independent variables to earnings persistence. There is a positive association between firm size on earnings persistence. Conversely, a negative association between the level of debt to earnings persistence. Coulson *et al.* (2015) use loss to analyze the effect on earning persistence and shows that companies with negative earnings (loss) tend to have low earnings persistence levels. This study also controls sales growth, as Lee & Yoon (2012) study. Dechow *et al.* (2010) and Fanani (2010) controls the volatility of cash flows and the accrual value of earnings persistence.

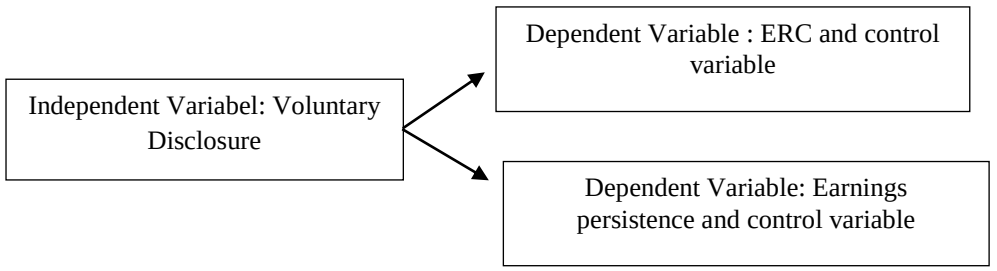

Figure 1. Research Framework

An understanding of the measurement of research variables can be explained in the definition of variables presented in the appendix A. All analysis of this study conducted using STATA. Figure 1 presents correlation of dependent, indepedent and control variable.

RESULTS AND DISCUSSION

Table 2 below presents the descriptive statistics of all operational variabels. Based on the descriptive statistics table, the ERC average is -0.034, with a maximum value of 0.897. This value is the result of data after in winsorize, marginalizing the existence of data outliers. The mean earnings persistence of 274 sample companies is -0.040939. Francis *et al.* (2008) states that the greater the value indicates the higher the persistence level. The mean value of the company's WTDISC index is 0.310, this value is slightly lower than Hossain & Hammami (2009). The mean value of WTDISC presents that listed Indonesia company disclosure of voluntary aspect 31% from all disclosure list. Next, the descriptive statistics table also explains the mean value, median value, minimum value and maximum value of the control variable**.**

Table 3 present pearson correlation for research variable. Pearson correlation test table informs that there is no significant influence between the extent of voluntary disclosure to PERSIST. However, the Pearson correlation test shows a significant negative association between ERC and voluntary disclosure variables. However, not all voluntary disclosure criteria have a significant association. Voluntary disclosures related to asset acquisition and expiration (WT2) and disclosures related to company research and development programs (WT3) do not have a significant association to ERC. The results of the Pearson correlation test also show that the control variables that have a significant association to ERC are company size (SIZE) and the ratio of PBV.

Regression analysis maintained in this study is the OLS cross-sectional method, in which the study sample consisted of one year from all industries. Regression analysis is performed to determine the association between the extent of voluntary disclosure of PERSIST and ERC as well as its significance value. The regression analysis model developed in the study is:

Model 1:

$$ERC = \beta0 + \beta1WTDISC_{i,t} + \beta2SIZE_{i,t} + \beta3LEV_{i,t} + \beta4LOSS_{i,t} + \beta5PBV_{i,t} + \varepsilon_{i,t}$$

Model 2:

$$PERSIST = \beta0 + \beta1WTDESC_{i,t} + \beta2SIZE_{i,t+1} + \beta3LEV_{i,t+1} + \beta4LOSS_{i,t+1} + \beta5VAK_{i,t+1} + \beta6ACC_{i,t+1} + \beta7SALES_{i,t+1} + \varepsilon_{i,t}$$

According to table 4 result of OLS regression, there is an influence of the extensive level of voluntary disclosure on the ERC with negative significance level of 1%. It means voluntary disclosure decrease ERC. In addition, the control variable that has a significant effect is PBV with a significance level of 5%. In this study, 14.7% regression models can explain the dependent variable, in accordance with the value of r^2. ERC_Robust column is the result of robust regression testing which aims to minimize the irregularity of research data.n Table 5 present OLS regression to examine the impact of voluntary on earnings persistence. There is no significant correlation between voluntary discolure on earnings persistence. Positive sign on coefficient meaning that voluntary disclosure increase earnings persistence, but not significant.

	Mean	Median	Minimum	Maximum
ERC	-0.034	-0.026	-0.696	0.897
PERSIST	-0.040939	0.230	-13.95506	17.76599
WTDISC	0.310	0.304	0.089	0.607
WT1	0.327	0.350	0.050	0.550
WT2	0.064	0.000	0.000	0.500
WT3	0.063	0.000	0.000	0.600
WT4	0.464	0.333	0.000	1.000
WT5	0.377	0.353	0.059	0.941
WT6	0.467	0.400	0.000	1.000
TASSET	8.796.000.000	2.559.000.000	47.676.256	2.454.000.000.000
Lead_TASEET	9.295.000.000	2.541.000.000	46.760.927	2.619.000.000.000
LEV	0.528	0.488	0.079	3.029
Lead_LEV	0.521	0.489	0.095	2.617
LOSS	0.119	0.00	0.00	1.00
Lead_LOSS	0.119	0.00	0.00	1.00
PBV	0.002	0.001	-0.000	0.046

Tabel 2. Descriptive Statistics

	ERC	PERSIST	WTDISC	WT1	WT2	WT3	WT4	WT5	WT6
ERC	1.000								
PERSIST	0.035	1.000							
WTDISC	-0.171***	0.006	1.000						
	(0.000)	(0.924)							
WT1	-0.156***	0.028	0.943***	1.000					
	(0.001)	(0.648)	(0.000)						
WT2	-0.047	0.030	0.561***	0.460***	1.000				
	(0.329)	(0.628)	(0.000)	(0.000)					
WT3	-0.064	-0.016	0.427***	0.351***	0.295***	1.000			
	(0.191)	(0.789)	(0.000)	(0.000)	(0.000)				
WT4	-0.108**	-0.016	0.833***	0.749***	0.474***	0.355***	1.000		
	(0.026)	(0.800)	(0.000)	(0.000)	(0.000)	(0.000)			
WT5	-0.178***	0,040	0.963***	0.853***	0.507***	0.350***	0.776***	1.000	
	(0.000)	(0.515)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		
WT6	-0.164***	0.065	0.907***	0.816***	0.493***	0.370***	0.719***	0.855***	1.000
	(0.001)	(0.286)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	

Tabel 3. Pearson Correlation

* $p < 0.05$, ** $p < 0.05$, *** $p < 0.01$

Tabel 4. OLS Model 1 Regression Test Results

	Prediction of Direction	(1) ERC	(2) ERC Robust
WTDISC	(-)	-0.562***	-0.562***
SIZE15	(+)	-0.003	-0.003
LEV15	(-)	-0.049	-0.049
LOSS	(-)	-0.093	-0.093
PBV	(+)	8.356**	8.356*
_cons		0.310	0.310
r2		0.147	0.147
N		274	274

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Tabel 5. OLS Model 2 Regression Test Result

	Prediction of Direction	(1) PERSIST	(2) PERSIST Robust
WTDISC	(+)	-0.966	-0.966
SIZE16	(+)	0.212	0.212*
LEV16	(-)	-0.081	-0.081
LOSS16	(-)	-1.242*	-1.242
VAK	(-)	3.370	3.370
ACC	(+)	0.003	0.003
SALES	(+)	0.057	0.057*

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The researcher also conducted an advanced regression test on each voluntary disclosure criterion, where the results are shown in table 6. Regression testing between the variables of extent of voluntary disclosure to PERSIST, both per disclosure criteria and overall shows no significant association. The results of the regression test also inform that all voluntary disclosure criteria have a negative association to the ERC. WT1 has a 5% significance in robust and non-robust regression. Likewise with WT3 which has a significance level of 5%. WT5 with a significance value of 5% for non-robust regression and 1% significance in robust regression. WT6 has a 10% significance in the non-robust regression test and a 5% significance after the robust regression test.

Effects of Voluntary Disclosure to ERC

Pearson correlation test results and OLS regression test showed a significance of 1% in the association of the extent of voluntary disclosure with ERC. Voluntarily disclosed information has a negative effect on the ERC. The results of this study support hypothesis proposed by researchers. Widiastuti (2016) stated that earnings informativeness will increase along with the high uncertainty of future conditions. Investors will incline to take into account the voluntary information disclosed by the company in making investment decisions. Another study was conducted by Scaltirto (2016) who stated that voluntary disclosure is a sign of increasing company performance to external parties. The extent of information conveyed in voluntary disclosures reduces information asymmetry between companies and investors (Francis *et al.*, 2008). Besides that Lang & Lundholm (1993) found that disclosure information is a consequence of the high asymmetry of company information related to the low stock return. The logical implication of additional information will reduce the informatization of earnings information (ERC) for investors.

The extent of voluntary disclosure is a substitute for the informativeness of corporate profits. Therefore, companies can increase voluntary disclosure to improve information received by shareholders.

	(1) Persist	(2) Persist Robust	(1) ERC	(2) ERC Robust
WTDISC	-0.966	-0.966	-0.562***	-0.562***
Control Variable	Included	Included	Included	Included
r^2	0.061	0.061	0.147	0.147
WT1	0.029	0.029	-0.451**	-0.451**
Control Variable	Included	Included	Included	Included
r^2	0.058	0.058	0.137	0.137
WT2	0.770	0.770	-0.027	-0.027
Control Variable	Included	Included	Included	Included
r^2	0.058	0.058	0.122	0.122
WT3	0.169	0.169	-0.354**	-0.354**
Control Variable	Included	Included	Included	Included
r^2	0.063	0.063	0.139	0.139
WT4	-0.221	-0.221	-0.041	-0.041
Control Variable	Included	Included	Included	Included
r^2	0.065	0.065	0.111	0.111
WT5	-1.674	-1.674	-0.328**	-0.328***
Control Variable	Included	Included	Included	Included
r^2	0.069	0.069	0.132	0.132
WT6	-0.453	-0.453	-0.176*	-0.176**
Control Variable	Included	Included	Included	Included
r^2	0.060	0.060	0.135	0.135

Tabel 6. OLS Regression Results for Each Disclosure Criteria

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Characteristics of economic conditions are uncertain, especially as the last three years as a result of the slowdown in the world economy lead to low-profit informativeness. The logic of thinking, investors shall not rely solely on earnings information in making investment decisions. Investors need to consider other information relating to the company, including information that is voluntarily disclosed. Thus, the extent of voluntary disclosure can be alternative information to stakeholders in making decisions

Additional disclosure of financial information (WT1), information on research and development policies of the company (WT3), information on human resources (WT5) and disclosure of social responsibility (WT6) is negatively significant to the ERC. Meanwhile, for the type of disclosure of acquisition and disposal of assets (WT2) and forecast of the influence of future external factors (WT4) does not affect the ERC. Based on the results of this study, companies can expand voluntary disclosure information on criteria that have a significant association with ERC.

Effect of Voluntary Disclosure on Earnings Persistence

Based on Pearson correlation test and OLS regression analysis shows that there is no significant association between voluntary disclosure to earnings persistence. Tests are also conducted for each voluntary disclosure criteria, where all criteria also do not have an association with the persistence of earnings. This study has different results from the research conducted by Lassad & Khamoussi (2012) in French SBF listed companies.

However, the results of this study are in line with the research conducted by Banghøj & Plenborg (2008) on listed companies in Denmark. This equality assumption is almost the same with the economic characteristics of the country, classified as an emerging market. In addition, Gelb & Zarowin (2002) also explain that there is no association between voluntary disclosure of future earnings. Thus, the extent of voluntary disclosure is not enough to be able to convince stakeholders of the company's performance in the future, so that it does not affect earnings persistence.

Dechow *et al.* (2010) classifies earnings persistence as a proxy for earnings quality based on the earnings attribute itself. This shows that earnings persistence is also closely related to the company's internal performance. Unlike the case with voluntary disclosure is information that is intended directly for third parties. This difference allows the absence of significance of the association between voluntary disclosure of earnings persistence. The logic of thinking, a positive response can be given by investors to the extent of the company's voluntary disclosure (Shi *et al.*, 2012). However, this positive response has not been able to ensure good performance in the future. Other internal and external factors also directly influence the performance of the company. As happened in 2015, the sharp turmoil of the world economy caused a weakening of the Indonesian business sector. It can be seen from 156 companies that went bankrupt because they were unable to survive the impact of the decline in the rupiah exchange rate which reached Rp 14.000.

CONCLUSION

This study found a significant negative association to the extent of voluntary disclosure to the ERC. These results support the first hypothesis proposed by the researcher. Additional information submitted by the company to investors encourages investors to take into account the information in addition to earning information in decision making. Therefore, the extent of voluntary confirmation is substitutive to informational profit (ERC). Testing the association of voluntary disclosure to the ERC is also conducted for each disclosure criteria. As a result, only disclosures relating to financial information, research and development, information on human resources and social responsibility are significantly negatively related to the ERC. Meanwhile, the disclosure of information regarding the acquisition and release of assets and future company forecasts has no significant effect on the ERC.

This study also found that there was no significant association between voluntary disclosure of earnings persistence. It can be concluded that the results of the study reject the second hypothesis proposed by the researcher. Numerous factors involved in the profits obtained by the company allows the absence of an association between the extent of voluntary disclosure to earnings persistence. The researcher also conducted additional testing for each disclosure criteria. However, the results of the test still exhibit that there is no significant association between the extent of voluntary disclosure to earnings persistence. Limitations one period research in this study should be considered for future research. Using other earnings quality atributes can be alternative to analyze the association between voluntary disclosure and earnings quality.

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APPENDIX
Measurement Operational Variable

Variables	Definitions of Variables
Independent Variable	
Total Voluntary Disclosure (WTDISC)	Weighted value of disclosure score (disclosure score delivered divided by the maximum total score) .
WT1	Weighted value of disclosure score of financial information.
WT2	Weighted value of disclosure score of fixed asset acquisition and disposal.
WT3	Weighted value of disclosure score of research and development information.
WT4	Weighted value of disclosure score of corporate prospect based on external factors information.
WT5	Weighted value of disclosure score of human resource information.
WT6	Weighted value of disclosure score of corporate social responsibility information.
Dependent Variables	
ERC	*Unexpected earnings coefficients on cumulative abnormal return.*

$$CAR_{i,t} = \beta 0 + \beta 1 UE_{i,t} + \varepsilon_{i,t}$$

$$CAR_{i,t} = \sum AR_{i,t}$$

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

$$Ri,t = \frac{Pi,t - Pi,t-1}{Pi,t-1}$$

$$R_{m,t} = \frac{IHSGt - IHSGt-1}{IHSGt-1}$$

$$UE_{i,t} = \frac{EPSi,t - EPS\ i,t-1}{EPSi,t-1}$$

$CAR_{i,t}$: *cumulative abnormal return* perusahaan i tahun t
$\beta 1$: Earnings Response Coefficient (ERC)
$UE_{i,t}$: Unexpected earnings perusahaan i tahun t
$AR_{i,t}$: Abnormal return perusahaan i tahun t
$R_{i,t}$: Tingkat pengembalian aktual perusahaan i tahun t
$R_{m,t}$: Tingkat pengembalian pasar tahun t
$P_{i,t}$: Harga saham perusahaan i periode t
$P_{i,t-1}$: Harga saham perusahaan i periode t-1
$IHSG_{i,t}$: Indeks harga saham gabungan selama periode t
$IHSG_{i,t-1}$: Indeks harga saham gabungan selama periode t-1
$EPS_{i,t}$: Laba per lembar saham perusahaan i tahun t
$EPS_{i,t-1}$: Laba per lembar saham perusahaan i tahun t

Earnings Persistence (PERSIST)	Regression coefficients (AR1) earnings per share (EPS) $EPS_{i,t+1} = \alpha_{i,0} + \alpha_{1,i}EPS_{i,t} + \varepsilon_{i,t}$
Control Variables	
Firm Size (SIZE)	$SIZE_t$ = Log (Total $Asset_t$) Where: $Size_t$: Firm size year t Total $Asset_t$: Total firm asset at the end of year t
Debt Level (LEV)	$LEV = \frac{Total\ Hutang\ t}{Total\ Asset\ t}$ Where: LEV: corporate debt ratio year t Total $Debt_t$: total company debt end of year t Total $Asset_t$: total company asset end of year t
Negative Profit (LOSS)	Dummy variables, score 1 if profit is negative and score 0 if otherwise.
Sales Growth (Sales)	$SALES = \frac{Salest - Sales\ t-1}{Sales\ t-1}$ Where: Sales: Sales Growth $Sales_t$: net sales year t $Sales_{t-1}$: net sales year t-1
Cash Flow Volatility (VAK)	$VAK = \sigma \frac{Operating\ Cash\ Flow\ t}{Total\ Asset\ t}$ Where: VAK: cash flow volatility *Operating Cash Flow*$_t$: Total operating cash flow of the company at year t Total $Asset_t$: Total assets of the company at the end of the year
Accrual Value (ACC)	$ACC = \sigma(earnings_{i,t} - CFO_{i,t})$ Where: $Earnings_t$: Earnings before extraordinary items year t CFO_t: Firm's operating cash flow year t
***Price to Book Value* (PBV)**	$PBV = \frac{MV\ t}{BV\ t}$ Where: PBV: *Price to Book Value* MV_t: market value of corporate equity year t BV: book value of corporate equity year t