

## How the Market Values Sustainability Performance? Studies in Indonesia and Japan

Maria Magdalena Duarmas<sup>1</sup> | Erni Ekawati<sup>2</sup> \* 

<sup>1</sup>Universitas Kristen Duta Wacana, Faculty of Business, Yogyakarta, Indonesia

<sup>2</sup>Universitas Kristen Duta Wacana, Faculty of Business, Yogyakarta, Indonesia

\*Correspondence to: Erni Ekawati, Universitas Kristen Duta Wacana, Faculty of Business, dr. Wahidin Sudirohusodo st. 5-25, Yogyakarta 55224, Indonesia.

E-mail: erniekawati@staff.ukdw.ac.id

**Abstract:** When earnings management practices are not disclosed properly, it can decrease value relevance of financial information. If earnings management is linked with profitability, its effect on decreasing value relevance becomes stronger. However, sustainability performance represented by ESG scores can have the opposite effect. This study aims to examine the effect of earnings management and value relevance, moderated by profitability and ESG scores. The samples used in this study are manufacturing companies listed on the Indonesia Stock Exchange and the Japan Stock Exchange in the period 2016-2019. Multiple regression analysis tests the hypothesis. The results indicate that earnings management has a negative and significant effect on value relevance in both Indonesia and Japan. Corporate performance measured by profitability can increase the negative effect of earnings management on value relevance, but sustainability performance measured by ESG scores can reduce the negative effect. The implication is that the marketplaces greater trust in companies that engage in ESG activities. As a trade-off, it is possible that ESG can be used to cover up these earnings management practices. This study contributes to adding evidence on the relationship between earnings management and value relevance, specifically when it is linked to profitability and ESG scores.

**Keywords:** earnings management, ESG, profitability, sustainable performance, value relevance.

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## INTRODUCTION

The value relevance of accounting information is still an important topic in accounting research (Rahman et al., 2020). Accounting standards are designed to enhance comparability, enforce transparency, provide relevant information, and deliver financial statements to external users (de Villiers et al., 2022). Earnings management and value relevance have a close relationship (Ratnaningrum et al., 2022). Value relevance explains the value of a company. While earnings management involves managerial accounting actions aimed at specific goals, allowing investors and creditors to gauge a company's value based on its share price (Kliestik et al., 2021). In this case, investors in particular usually have expectations of future growth due to the past performance of value shares (Ekawati, 2012). The value of shares moves according to the movement of reported earnings. However, investors and creditors must understand that managers can act to manipulate information for their own interests. Shan (2015) conducted a study in China and found that there is a negative impact of value relevance for



companies involved in earnings management, more significant than companies that are not involved. Mostafa (2017) conducted a study in Egypt, where the findings showed that opportunistic earnings management affects the value relevance of accounting earnings. Prihatni et al. (2023) also found interesting results regarding the effect of earnings management on value relevance, where earnings management weakens value relevance.

Companies that engage in earnings management are certainly penalized by the market, so they have a low value relevance to financial statements. However, companies that start paying attention to their sustainability performance will be rewarded by the market. Following study conducted by Lourenço et al. (2012), this study also utilizes a multi-theory framework that combines institutional perspective, stakeholder theory, and resource-based perspective. A series of hypotheses are developed by linking earnings management and value relevance and considering profitability and sustainability performance as moderating variables. Sustainability reports are non-financial information that is often used in value relevance studies (Endiana & Suryandari, 2021; Werastuti et al., 2021; Chen & Hung, 2021; Boodhun & Jugurnath, 2023). Qiu et al. (2016) also conducted a study which investigates the relationship between environmental and corporate social disclosures on profitability and market value. Businesses should seek association between financial and non-financial strategies to achieve long-term goals (Esch et al., 2019; Omran et al., 2021; Salehi & Arianpoor, 2021). In this study, profitability is used as a short-term performance measure, while in the long term it is measured by sustainability performance.

Voluntary activities that contribute to sustainable business have become an important dimension of corporate business practices (Boiral et al., 2019; Pizzi et al., 2022; van Zanten & van Tulder, 2021). Corporate sustainability performance measures the extent to which a company considers economic, environmental, social, and governance factors into its operations, and ultimately impacts the company and society (do Prado et al., 2020; Mensah, 2019). All activities that support sustainable business are claimed to be a source of competitive advantage for the company (Geissdoerfer et al., 2018). There have been many studies conducted related to corporate sustainability performance, as measured by ESG (Environmental, Social, and Governance) scores, with empirical evidence and surveys from various studies on the effect of ESG scores on corporate financial performance are widely available (Lunawat & Lunawat, 2022; Bruna et al., 2022; Saygili et al., 2022; Sinha Ray & Goel, 2023). Companies that engage in ESG activities are considered motivated to follow norms and meet stakeholder expectations (Rahmaniati & Ekawati, 2024). The companies hope that building good relationships with stakeholders will bring financial benefits in the form of support, that leads to an increase in the quality of intangible assets (Sumaryo et al., 2024). This happens because stakeholders have an assessment that companies that implement ESG voluntarily are companies that run their business ethically and with high integrity.

This study is constructed with three hypotheses. The first argument of this study examines the effect of earnings management and value relevance. If earnings management practices in a company are high, it will affect the information contained in earnings, resulting in low value relevance (Ratnaningrum et al., 2021). The study conducted by Barth et al. (2023) provides a statement that the quality of accounting information will be reflected in its value relevance. Companies that have low information quality due to earnings management practices will have an impact on the low value relevance compared to companies that do not carry out earnings management. Previous studies that have been conducted by Mostafa (2017) and Shan (2015) found that there is a negative effect of earnings management on value relevance. Therefore, the first hypothesis in this study states that earnings management has a negative effect on value relevance.

Profitability is a measure of the company's financial performance, which is based on the company's accounting and financial information. If the available information is of poor quality, then the measured performance will not reflect the actual conditions. Profitability is a performance measure that depends on the periodization of

accounting reporting and can be said to be a measure of short-term financial performance. Thus, in the presence of earnings management practices, high profitability will actually strengthen the negative effect of earnings management on the relevance of its value. Thus, the second hypothesis states that the higher the profitability of the company, the stronger the negative effect of earnings management on value relevance.

Higher sustainability performance leads to less economic uncertainty, more predictability of future earnings, and lower risk for investors. Sustainability performance represented by ESG score can increase profits in the long run through improved stakeholder relationships, reduced agency conflict costs, and reputation creation. All these aspects make the company more attractive to investors. From the studies that have been conducted previously, in aggregate it can be concluded quite consistently that there is a tendency for the market not to penalize companies with low ESG scores, instead the market actually rewards companies with high levels of ESG scores (Mohammad & Wasiuzzaman, 2021; Ionescu et al., 2019). From an institutional perspective, this reputation and recognition will be very beneficial, as it can make it easier for the company to gain access to external resources. From a stakeholder perspective, sustainability performance can increase trust in the integrity of the company. From a resource-based perspective, higher sustainability performance demonstrates the company's commitment to environmental, social and governance concerns. Thus, when associated with value relevance and earnings management, sustainability performance, as measured by ESG scores, can reduce the negative influence of earnings management on value relevance. Therefore, the third hypothesis states that the higher the company's ESG score, the lower the negative effect of earnings management on value relevance.

This study aims to examine the effect of two main variables, which are earnings management and value relevance, moderated by other variables, profitability and sustainability performance represented by ESG scores. This study was conducted in two countries, which were Indonesia and Japan to explore the differences in accounting and sustainability practices and their impact on capital market responses in the context of different cultures and legal systems. The two countries are used as a representation of developing and developed countries in the Asian region. With capital markets having different characteristics, this study provides an in-depth understanding of how earnings management practices and sustainability disclosures affect value relevance. This research contributes to the novelty by expanding the understanding of accounting and sustainability practices in developing and developed countries.

## METHODS

The research sample was selected using purposive sampling method. The data used in this study are secondary data from manufacturing companies listed on the Indonesia and Japan Stock Exchanges in 2016-2019. Table 1 presents the number of research samples to be used. From the total sample of 158 manufacturing companies in Indonesia, only 25 companies have ESG scores, while from 278 companies in Japan, only 32 companies have ESG scores. Thus, for testing the 3rd hypothesis, it will be used according to the availability of the number of samples.

The research design aims to examine the effect of earnings management on the value relevance of the company. Initially, both earnings management and value relevance for each company within the research sample must be estimated. Value relevance is estimated by performing time series regressions between earnings per share and stock return variables for each company, with the  $R^2$  value of each regression indicating its value relevance. This regression is performed by each company across quarters 1 to 4 spanning from 2016 to 2019, resulting in one  $R^2$  value per company. Then, earnings management is estimated using the Stubben (2010) model

to obtain discretionary revenue through cross-sectional regression analysis. Firm performance as a moderating factor is measured using profitability and ESG score. Profitability is measured by Return on Assets (ROA), and ESG is measured using ESG scores issued by Refinitiv.

**Table 1 Company Sample**

| Sampling Criteria   | Total Indonesian Companies | Total Japanese Companies |
|---|----------------------------|--------------------------|
| Manufacturing companies listed on the Indonesia and Japan Stock Exchanges               | 210                        | 350                      |
| Companies that do not use Rupiah and Yen (local currency) in their financial statements | -15                        | -20                      |
| Companies with incomplete quarterly financial statements                                | -37                        | -52                      |
| Number of companies that meet the criteria  | 158                        | 278                      |
| Observation years 2016–2019 (years)   | 4                          | 4                        |
| Number of research observations (company years)   | 632                        | 1,112                    |

In this study, there are several steps taken, namely: First, testing the effect of earnings management on value relevance in each country by using lagged data each year. The dependent variable used is value relevance, while the independent variable used is earnings management obtained from the estimation results with the Stubben (2010) model. The control variables used to test statistical model 1 and statistical model 2 are Debt to Equity Ratio (DER) and Firm Size (FS). Second, testing the effect of earnings management on value relevance that is mediated by profitability. The dependent variable used is value relevance, while the independent variable used is earnings management. The moderating variable used is ROA. The control variables used are DER and FS. Third, testing the effect of earnings management on value relevance with ESG score as a moderate variable, following the same steps as the second stage. The research hypotheses are tested using OLS (ordinary-least squares) regression, taking into account all applicable classical assumption tests. If there is a violation of the homoscedasticity assumption, the weighted least-square (WLS) method will be adopted. If there is multicollinearity in the model using moderating variables, two-stage least squares will be used.

### Hypothesis Testing

The hypothesis in this study is tested with a statistical model. The statistical model is as follows:

Statistical Model 1

$$VR = \alpha_1 + \beta_1 EM + C_1 DER + C_2 \ln\_FS + \varepsilon$$

The hypothesis is supported if:  $\beta_1$  is smaller and significant

In this case:

VR : Value Relevance

$\alpha$  : Constant

$\beta_1, C_1, C_2$  : Regression coefficient

EM : Earnings Management

DER : Debt to Equity

$\ln\_Fs$  : Ln Firm Size

$\varepsilon$  : error term

## Statistical Model 2

$$VR = \alpha_1 + \beta_1 EM + \beta_2 ROA + \beta_3 EM * ROA + \beta_4 DER + \beta_5 Ln\_FS + \epsilon$$

The hypothesis is supported if:  $\beta_3$  is smaller than zero and significant

## Statistical Model 3

$$VR = \alpha_1 + \beta_1 EM + \beta_2 ESG + \beta_3 EM * ESG + \beta_4 DER + \beta_5 Ln\_FS + \epsilon$$

The hypothesis is supported if:  $\beta_3$  is bigger than zero and significant

In this case:

VR : Value Relevance

$\alpha$  : Constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  : Regression coefficient

EM : Earnings Management

ROA : Return On Asset

ESG : Environmental, Social & Governance

DER : Debt to Equity

Ln\_FS : Ln Firm Size

$\epsilon$  : error term

## RESULTS AND DISCUSSION

Tables 2A and 2B show the descriptive statistics of the dependent and independent variables used to test research hypothesis 1 in Indonesia and Japan, respectively. The average VR in Indonesia and Japan shows almost the same magnitude of 12.4% and 15.4%, respectively, with a range of about 0% to about 80%. Likewise, for EM, the averages in Indonesia and Japan also show no significant difference. The EM data used is the absolute value of discretionary accruals obtained from the model Stubben (2010). However, the range of the lowest and highest values of average EM in Japan is slightly wider. Likewise, the mean and distribution of DER and Ln FS as control variables do not show any notable differences between Indonesia and Japan.

**Table 2A Descriptive Statistics for Statistical Model 1 in Indonesia**

| Variables | N   | Minimum | Maximum | Mean   | Std. Deviation |
|-----------|-----|---------|---------|--------|----------------|
| VR        | 158 | 0.001   | 0.811   | 0.124  | 0.157          |
| EM        | 632 | 0.000   | 7.778   | 0.487  | 0.863          |
| DER       | 632 | -10.310 | 22.020  | 1.327  | 1.797          |
| Ln FS     | 632 | 17.970  | 28.110  | 22.225 | 1.769          |

**Table 2B Descriptive Statistics for Statistical Model 1 in Japan**

| Variables | N    | Minimum | Maximum | Mean   | Std. Deviation |
|-----------|------|---------|---------|--------|----------------|
| VR        | 278  | 0.001   | 0.863   | 0.154  | 0.197          |
| EM        | 1112 | 0.000   | 11.369  | 0.420  | 0.902          |
| DER       | 1112 | 0.100   | 11.43   | 1.419  | 1.135          |
| Ln FS     | 1112 | 16.220  | 23.25   | 20.352 | 1.095          |

Notes: VR is the  $R^2$  obtained from the time series regression of NI/P on RET.

Tables 3A and 3B show the descriptive statistics of the dependent and independent variables used to test research hypothesis 2 in Indonesia and Japan, respectively. For testing statistical model 2, there is only the addition of ROA as a moderate variable. The average ROA in Indonesia and Japan is 5.1% and 4.2%, respectively. The range of the lowest and highest values for ROA is slightly wider in Japan. The number of samples for the independent variables is 4 times more because it is a sample over a 4-year period, while there is only 1 VR variable for each company. The independent variables in the regression are lagged 0 to 3.

**Table 3A Descriptive Statistics for Statistical Model 2 in Indonesia**

| Variables | N   | Minimum | Maximum | Mean   | Std. Deviation |
|-----------|-----|---------|---------|--------|----------------|
| VR        | 158 | 0.001   | 0.811   | 0.125  | 0.157          |
| EM        | 632 | 0.000   | 7.778   | 0.488  | 0.863          |
| ROA       | 632 | -2.410  | 0.920   | 0.051  | 0.139          |
| EM*ROA    | 632 | -0.542  | 1.399   | 0.029  | 0.105          |
| DER       | 632 | -10.310 | 22.020  | 1.327  | 1.797          |
| Ln FS     | 632 | 17.970  | 28.110  | 22.226 | 1.769          |

**Table 3B Descriptive Statistics for Statistical Model 2 in Japan**

| Variables | N    | Minimum | Maximum | Mean   | Std. Deviation |
|-----------|------|---------|---------|--------|----------------|
| VR        | 278  | 0.001   | 0.863   | 0.1542 | 0.197          |
| EM        | 1112 | 0.000   | 11.369  | 0.420  | 0.902          |
| ROA       | 1112 | -0.105  | 0.200   | 0.042  | 0.031          |
| EM*ROA    | 1112 | -0.106  | 0.863   | 0.016  | 0.043          |
| DER       | 1112 | 0.100   | 11.430  | 1.419  | 1.135          |
| Ln FS     | 1112 | 16.220  | 23.250  | 20.352 | 1.095          |

Notes: VR is the  $R^2$  obtained from the time series regression of NI/P on RET.

Tables 4A and 4B show the descriptive statistics of the dependent and independent variables used to test research hypothesis 3 in Indonesia and Japan, respectively. In testing with statistical model 3, there is a considerable sample reduction, as there are only 25 and 32 manufacturing companies with ESG scores in Indonesia and Japan, respectively.

**Table 4A Descriptive Statistics for Statistical Model 3 in Indonesia**

| Variables | N   | Minimum | Maximum | Mean   | Std. Deviation |
|-----------|-----|---------|---------|--------|----------------|
| VR        | 25  | 0.005   | 0.504   | 0.142  | 0.170          |
| EM        | 100 | 0.009   | 7.778   | 1.162  | 1.422          |
| ESG       | 100 | 8.220   | 74.430  | 41.795 | 18.354         |
| EM*ESG    | 100 | 0.250   | 401.230 | 49.009 | 68.802         |
| DER       | 100 | 0.210   | 4.600   | 1.101  | 0.890          |
| Ln FS     | 100 | 21.880  | 28.110  | 24.509 | 1.340          |



**Table 4B Descriptive Statistics for Statistical Model 3 in Japan**

| Variables | N   | Minimum | Maximum | Mean   | Std. Deviation |
|-----------|-----|---------|---------|--------|----------------|
| VR        | 32  | 0.003   | 0.807   | 0.188  | 0.249          |
| EM        | 128 | 0.006   | 10.793  | 0.377  | 1.263          |
| ESG       | 128 | 5.920   | 89.380  | 51.251 | 22.199         |
| EM*ESG    | 128 | 0.190   | 964.660 | 26.887 | 111.796        |
| DER       | 128 | 0.100   | 8.150   | 1.111  | 1.270          |
| Ln FS     | 128 | 16.830  | 22.760  | 20.437 | 0.978          |

Notes: VR is the R<sup>2</sup> obtained from the time series regression of NI/P on RET

Tables 5A and 5B show the regression test results for Statistical Model 1 in Indonesia and Japan respectively. Based on the regression test results in Table 6A, it shows that the regression coefficient for the EM variable from 2016 to 2019 has a negative value but only in 2018 is statistically significant at the  $\alpha = 1\%$  level, indicating that in Indonesia, EM affects VR with a lagged 1 year. Similarly in Japan, Table 6B shows that the regression coefficient for the EM variable from 2016 to 2018 has a negative value but is statistically significant only in 2018 at the  $\alpha = 1\%$  level. EM has an effect on VR by lagging 1 year. Thus hypothesis 1 is supported in both Indonesia and Japan.

**Table 5A Regression Results for Statistical Model 1 in Indonesia**

| Years | N   | EM                    | DER                   | Ln_FS             |
|-------|-----|-----------------------|-----------------------|-------------------|
| 2016  | 158 | -0.095<br>(-0.707)    | 0.333**<br>-2.332     | 0.118<br>(0.814)  |
| 2017  | 158 | -0.166<br>(-1.207)    | 0.351***<br>-2.761    | 0.129<br>(0.938)  |
| 2018  | 158 | -0.377***<br>(-2.722) | 0.372***<br>-3.144    | 0.361**<br>-2.600 |
| 2019  | 158 | -0.166<br>(-1.130)    | -0.517***<br>(-4.089) | 0.202<br>-1.372   |

**Table 5B Regression Results for Statistical Model 1 in Japan**

| Years | N   | EM                    | DER                | Ln_FS              |
|-------|-----|-----------------------|--------------------|--------------------|
| 2016  | 278 | -0.079<br>(-0.698)    | 0.017<br>(0.149)   | 0.044<br>(0.376)   |
| 2017  | 278 | -0.117<br>(-1.049)    | 0.020<br>(0.188)   | 0.015<br>(0.133)   |
| 2018  | 278 | -0.321***<br>(-3.008) | 0.004<br>(0.034)   | 0.196*<br>-1.771   |
| 2019  | 278 | 0.076<br>(0.698)      | -0.108<br>(-0.994) | -0.008<br>(-0.071) |

Notes: Numbers in parentheses are t-values

\*\*\*, \*\*, \* significant at level  $\alpha = 1\%$ ,  $5\%$ , and  $10\%$

The DER control variable in Indonesia has a regression coefficient value that is positive from 2016 to 2018 and negative in 2019. The Ln\_FS variable has a regression coefficient value that is positive from 2016 to 2018, in 2018 it is significant at the  $\alpha = 10\%$  level, while in 2019 the regression coefficient is negative. Meanwhile, in Japan, only the Ln\_FS variable has a positive coefficient and is significant at the  $\alpha = 10\%$  level in 2018.

Tables 6A and 6B show the regression results for testing with Statistical Model 2. From the empirical evidence found in Indonesia. Table 6A shows that the interaction variable, EM\*ROA, has a negative regression coefficient from 2016 to 2019, but only in 2017 which is statistically significant at the  $\alpha = 5\%$  level and worth  $-0.787$ . This shows that the higher the profitability of the company, the stronger the negative effect of earnings management on value relevance. Thus hypothesis 2 is supported in Indonesia, from the regression results in 2018, with a lagged 1 year. ROA variable has a positive and significant effect from 2016 to 2019 at the level of  $\alpha = 1\%$  and  $\alpha = 5\%$ . The control variable DER has a negative and significant effect in 2019 at the  $\alpha = 1\%$  level, while from 2016 to 2018 it is positive and significant at the same  $\alpha$  level. The control variable Ln\_FS has a positive effect in 2018, while in other years the regression coefficient is negative and insignificant.

**Table 6A Regression Results of Statistical Model 2 in Indonesia**

| Years | N   | EM                 | ROA                | EM*ROA               | DER                   | Ln_FS              |
|-------|-----|--------------------|--------------------|----------------------|-----------------------|--------------------|
| 2016  | 158 | 0.025<br>(0.147)   | 0.364**<br>-1.969  | -0.043<br>(-0.213)   | 0.412***<br>-2.855    | -0.059<br>(-0.362) |
| 2017  | 158 | 0.555*<br>-1.727   | 0.647***<br>-2.881 | -0.787**<br>(-2.157) | 0.401***<br>-3.249    | -0.027<br>(-0.173) |
| 2018  | 158 | -0.171<br>(-0.773) | 0.355**<br>-2.026  | -0.212<br>(-0.790)   | 0.441***<br>-3.707    | 0.235<br>-1.394    |
| 2019  | 158 | 0.160<br>(0.749)   | 0.718***<br>-2.922 | -0.414<br>(-1.292)   | -0.557***<br>(-4.390) | -0.021<br>(-0.135) |

**Table 6B Regression Results of Statistical Model 2 in Japan**

| Years | N   | EM                 | ROA                 | EM*ROA              | DER                | Ln_FS              |
|-------|-----|--------------------|---------------------|---------------------|--------------------|--------------------|
| 2016  | 278 | 0.089<br>(0.648)   | 0.017<br>(0.197)    | -0.132<br>(-0.945)  | -0.007<br>(-0.097) | 0.020<br>(0.286)   |
| 2017  | 278 | -0.117<br>(-0.766) | -0.136*<br>(-1.740) | 0.080<br>(0.533)    | -0.052<br>(-0.734) | 0.043<br>(0.607)   |
| 2018  | 278 | -0.210<br>(-1.301) | -0.058<br>(-0.683)  | 0.088<br>(0.536)    | -0.019<br>(-0.269) | 0.080<br>-1.135    |
| 2019  | 278 | 0.151*<br>-1.762   | 0.170*<br>-1.887    | -0.161*<br>(-1.818) | 0.011<br>(0.150)   | -0.030<br>(-0.425) |

Notes: Numbers in parentheses are t-values

\*\*\*, \*\*, \* significant at level  $\alpha = 1\%$ ,  $5\%$ , and  $10\%$

Table 6B is empirical evidence found in Japan, the interaction variable, EM\*ROA, in 2017 and 2018 has a positive coefficient but is not statistically significant. In 2019, the regression coefficient is negative and significant



at the  $\alpha = 10\%$  level, which means that the higher the profitability of a company, the stronger the effect of earnings management on value relevance. Thus hypothesis 2 is supported in Japan with regression results in 2019, without lagged. All control variables, both DER and Ln FS do not have any significant effect on VR.

Tables 7A and 7B show the empirical evidence for testing with Statistical Model 3 in Indonesia and Japan, respectively. Table 7A shows that the interaction variable EM\*ESG in 2018 has a regression coefficient of 1.033 and is significant at the  $\alpha = 10\%$  level, while the other years do not show significant coefficient values. This indicates that the higher the ESG score, the smaller the negative effect of earnings management on value relevance. Thus, hypothesis 3 is supported from the regression results in 2018, with a lagged 1 year in Indonesia.

The DER control variable has a negative and statistically significant coefficient in almost all years, except 2017. The control variable Ln\_FS has a positive and significant coefficient in all years at the  $\alpha = 1\%$  level and  $\alpha = 5\%$  level.

**Table 7A Regression Results of Statistical Model 3 in Indonesia**

| Years | N  | EM                   | ESG                  | EM*ES G            | DER                   | Ln_FS              |
|-------|----|----------------------|----------------------|--------------------|-----------------------|--------------------|
| 2016  | 25 | -0.337<br>(-0.995)   | -0.675<br>(-1.822)   | 0.043<br>(0.107)   | -0.355*<br>(-2.392)   | 0.510**<br>-3.357  |
| 2017  | 25 | 0.499<br>(0.433)     | -0.267<br>(-1.379)   | -0.948<br>(-0.820) | -0.157<br>(-0.623)    | 0.667***<br>-4.899 |
| 2018  | 25 | -1.099**<br>(-2.594) | -0.465**<br>(-3.096) | 1.033*<br>-2.252   | -0.347**<br>(-2.868)  | 0.650***<br>-6.165 |
| 2019  | 25 | 0.166<br>(0.753)     | -0.338<br>(-1.575)   | -0.032<br>(-0.117) | -0.448***<br>(-5.870) | 0.667***<br>-6.980 |

**Table 7B Regression Results of Statistical Model 3 in Japan**

| Years | N  | EM                  | ESG                | EM*ES G            | DER                | Ln_FS              |
|-------|----|---------------------|--------------------|--------------------|--------------------|--------------------|
| 2016  | 32 | 0.550<br>(0.298)    | 0.001<br>(0.003)   | -0.612<br>(-0.327) | -0.305<br>(-1.574) | -0.089<br>(-0.386) |
| 2017  | 32 | 0.060<br>(0.122)    | 0.008<br>(0.017)   | 0.005<br>(0.008)   | -0.316<br>(-1.464) | -0.095<br>(-0.388) |
| 2018  | 32 | 0.053<br>(0.076)    | -0.011<br>(-0.043) | -0.115<br>(-0.157) | -0.193<br>(-0.971) | -0.056<br>(-0.243) |
| 2019  | 32 | -0.215*<br>(-1.811) | -0.156<br>(-0.646) | 2.388*<br>-1.718   | -0.220<br>(-1.155) | 0.059<br>(0.240)   |

Notes: Numbers in parentheses are t-values

\*\*\*, \*\*, \* significant at level  $\alpha = 1\%$ ,  $5\%$ , and  $10\%$

Table 7B shows that in the regression results in 2019, the EM\*ESG interaction variable has a coefficient of 2.383 and is significant at the  $\alpha = 10\%$  level. This indicates that the negative effect of earnings management on value relevance decreases when the company has a higher ESG score. Thus, hypothesis 3 is supported from the regression results in 2019, without lagged in Japan. None of the regression coefficients of the control variables DER or Ln FS are statistically significant.

From the results of testing all hypotheses with all statistical models that have been shown, this study can provide empirical evidence that can support all the hypotheses proposed. The results obtained are quite robust and consistent using a sample of manufacturing companies in both Indonesia and Japan.

Based on the results of this study, there is consistency with the findings of research conducted by Shan (2015), Mostafa (2017), and Prihatni et al. (2023) regarding the negative impact of earnings management on the relevance of firm value. This study also shows that the higher the profitability of the company, the stronger the negative effect of earnings management on value relevance. However, there is a significant difference in how the interaction between ESG scores and earnings management affects value relevance, which was not previously examined in previous studies. The findings from this study are in line with recent discussions regarding the incorporation of sustainability metrics, particularly ESG scores, in corporate valuation. Recent research highlights the importance of considering non-financial performance indicators alongside traditional financial metrics to provide a more complete evaluation of firm value.

The phenomenon that ESG scores weaken the negative impact of earnings management on value relevance may be due to several factors. First, companies that have strong sustainability practices tend to be more transparent and responsible in managing the company as a whole, thereby reducing the likelihood of engaging in aggressive earnings management tactics. Second, market recognition of ESG performance demonstrates a firm's commitment to long-term value creation and stakeholder welfare, thereby increasing investor confidence and reducing the risks associated with distortions in financial reporting. Finally, these findings highlight the level of market maturity in assessing corporate performance beyond short-term financial metrics, emphasizing the importance of environmental, social and governance aspects in investment decision-making.

Comparative analysis with existing research emphasizes the consistency of this study's findings across different geographical contexts. While some previous studies have investigated the relationship between sustainability performance and financial performance, few have specifically considered the interaction with earnings management practices. By conducting the analysis in Indonesia and Japan, this study extends the scope of previous literature by demonstrating the universal relevance of ESG scores in dampening the negative impact of earnings management on value relevance. This comparative analysis highlights the strength of the findings and underscores the importance of sustainability reporting globally in shaping market perceptions and valuations of firms.

The findings of this study are consistent with existing theories such as stakeholder theory and signaling theory, which suggest that companies engaging in sustainable practices signal their commitment to long-term value creation and stakeholder interests. In addition, the interaction between ESG scores and earnings management observed in this study is in line with agency theory. This theory suggests that transparent and accountable governance mechanisms can reduce agency conflicts as well as reduce opportunistic behaviors that may be committed by corporate managers. By explaining the mechanisms through which sustainability performance affects market perceptions and value relevance, this study makes an important contribution to a deeper understanding of the interaction between corporate sustainability initiatives and financial reporting dynamics.

This research confirms the importance of integrating sustainability principles into corporate governance frameworks for various stakeholders, including investors, regulators, and corporate practitioners. Investors can use ESG metrics as an additional tool to evaluate investment risks and opportunities, by incorporating sustainability considerations into their decision-making process. Regulators may consider requiring standardized ESG disclosures to increase transparency and comparability across industries, thereby promoting greater market

efficiency and investor confidence. This is important in the context of a market landscape that is increasingly concerned with environmental, social and governance (ESG) aspects.

## CONCLUSION

From the results of this study, it can be concluded that, first, earnings management has a negative and significant effect on value relevance both in Indonesia and Japan. The effect of earnings management on value relevance is only seen in the following year. Second, it is found consistent in two countries that profitability can increase the negative effect of earnings management on value relevance. This happens because profitability is measured using distorted accounting information. Third, this is not the case with sustainability performance as measured by ESG scores, where the opposite empirical evidence is found, that ESG scores can reduce the negative effect of earnings management on value relevance. These results indirectly contribute to the literature on the effect of earnings management and value relevance with profitability and ESG scores as moderators. Particularly, it provides insights into how the market values ESG scores. Furthermore, this suggests that investors have more confidence in companies that engage in ESG activities. However, the trade-off is that there is a possibility that the application of ESG can be used by companies to cover up activities that are not in accordance with social norms/standards, such as earnings management practices that have clearly reduced the value relevance of accounting information. Future research can explore how certain ESG practices affect the relationship between earnings management and firm value relevance by considering factors such as industry dynamics, environmental, regulatory, and cultural contexts. In addition, future research could explore the mechanisms through which transparency and accountability in ESG reporting affect investor perceptions and market valuations. Finally, future research could elevate the potential trade-offs and unintended consequences associated with the integration of ESG metrics into corporate governance and financial reporting frameworks. This could include examining the risk of greenwashing or strategic manipulation of ESG disclosures to mask underlying financial irregularities.

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## ORCID

Erni Ekawati  <https://orcid.org/0000-0002-1662-9415>

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