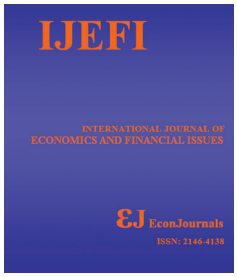

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The Effect of Earning Aggressivenesss on Stock Trading With Investor Sophistication and Asymmetry Information as Moderator

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ABSTRACT

This study aims to examine the effect of earning aggressiveness (EA) on stock trading with investor sophistication (IS) and asymmetry information (AI) as moderator. This research uses quantitative method with regression analysis model by stratified random sampling based on subsector strata in manufacturing company that go public in Indonesia Stock Exchange, with sample size of the company as 59 companies during the period of 2012–2016 (5 years). This study shows that EA significantly negatively influences the mean return scale (MRS), but has a significant positive effect on trading volume activity (TVA). The negative effect of earnings aggressiveness on MRS is stronger in firms with high IS levels than firms with low IS levels, while the negative effect of EA on TVA is stronger in firms that IS level is high than in companies with low IS levels. The negative effect of earnings aggressiveness on MRS is weaker in firms where the level of AI is high than in firms with low AI levels. While the negative effect of earnings aggressiveness on TVA is stronger in companies with high AI level than in companies with low AI level.

Keywords: Earning Aggressivenesss, Stock Trading, Investor Sophistication, Information Asymmetry
JEL Classifications: E44, G1

1. INTRODUCTION

This study was undertaken as an implication of Bhattacharya et al.'s research (2003) and Khaddafi (2014), and Lamoreaux et al. (2015) to further investigate the effect of earnings aggressiveness as a measure of accounting quality, on stock trading in the Indonesian stock market, by examining the moderating effects of investor sophistication (IS) and asymmetry information (AI). From Bhattacharya et al. (2003) and Khaddafi (2014), additional investigations are required, whether the role of accounting quality in financial statements on the stock market is also moderated by sophistication investors and AI. While from the study Lamoreaux et al. (2015), additional investigations are required whether the role of accounting quality in financial statements on the credit market also occurs in the stock market. This investigation becomes important to do in the midst of at least empirical research that examines how investor behavior in considering earnings aggressiveness as an accounting quality measure of an entity when making investment decisions in the stock market (Bhattacharya et al., 2003).

Earning aggressiveness (EA) is the opposite of accounting conservatism - where the economic losses are internalized faster, while the economic gain is internalized more slowly in the earnings/loss statement (Ball et al., 2000). According to Altamuro et al. (2005), EA is defined as a management action that leads to a tendency to delay the recognition of losses and accelerate revenue, which then affects earnings quality. EA is related to management actions to manipulate earnings (Bedard and Johnstone, 2004). EA is done by increasing the value of the accrual component, such as

inventory, and simultaneously lowering costs, resulting in higher profits than actual profits (Chan et al., 2001). The practice of EA will make the book value and profit of the current year will be higher, but in the future, both will be low and capital costs will increase (Kothari, 2001). According to Bhattacharya et al. (2003), EA is a tendency to delay the realization of losses and accelerate the realization of profits. Accruals will increase with increasing EA under conditions of realization of unchanged cash flows. Based on this argument, Bhattacharya et al. (2003) measures EA through scaled accruals that reduce current asset changes with changes in current liabilities, cash changes and depreciation, and adds to changes in the portion of long-term debt included in current liabilities and changes in income tax, which are scaled by dividing by total assets period previous.

There are two dimensions of stock trading measured, namely: Mean return scale (MRS) and trading volume activity (TVA), as in research Bhattacharya et al. (2003). The MRS is measured as the ratio of the average monthly return to the standard deviation of monthly returns. TVA is measured as the natural logarithm of the average trading volume ratio to the monthly market capitazation. The control variables involved in this research model are income smoothing and loss-avoidance as other accounting quality measures, as well as equity, financial risk, and assets.

Based on the background research, then the formulation of the problem in this study are as follows:

1. Does EA negatively affect the stock trading?
2. Is the negative effect between EA on stock trading weaker in firms with high IS levels than in companies with low IS levels?
3. Is the negative effect between EA on stock trading stronger in firms with high AI levels than in companies with low AI levels?

2. LITERATURE REVIEW AND HYPHOTESIS

Grand theory in this research is "agency theory" in which investor act as principal, while management of public company as agent. An agency relationship between an investor and a public company's management can lead to an information asymmetric condition because the management of a public company has more information than the investor who generates agency costs of the agency (cost of equity). As an agent, public company management is morally responsible for optimizing shareholder/principal profits, but on the other hand management also has an interest in maximizing their own well-being, so it is likely that agents do not always act in the best interests of the principal (Jensen and Meckling, 1976).

The researcher's consideration of the possible role of accounting quality in investment decisions in the stock market is based on the obligation of a public company to regularly deliver audited financial information to the public. Investors rely on audited financial reporting in the provision of information about the company's performance before making an investment decision.

The relationship of principal and agent between an investor and a public company is the relationship between an investor that includes his or her ownership of the company with the management of a public company that manages its ownership. Increased information about the management of public companies will reduce the risk for investors and help investors in pricing the investment (Sengupta, 1998).

Signaling theory is also the basis of the theory in this study. Gonedes (1978) mentions that the motivation of signaling encourages management to perform earnings management to present financial information either in the form of increased profits or dividend rate changes in the hope of signaling prosperity to shareholders.

This study considers the inclusion of investors sophistication level and AI as a moderator variable that determines the effect of EA, as a measure of accounting quality, to stock trading. Both of these determinants are contextual factors that contribute to investment decision making in the capital market.

Bartov et al. (2000) and Rajgopal (1999) states that sophistication investors are the determinants of the relationship between profit and return. Smart investors (sophisticated investors) are investors who are able to collect and process public information, while unsophisticated investors are investors who only use the company's financial information but do not analyze financial reports properly (Bartov et al., 2000). Smart investors are able to detect earnings management faster than unscrupulous investors (Balsam et al., 2002). Bartov et al. (2000) use institutional ownership, as a proxy of IS. The basic consideration is that institutional investors have more private information and have more sophisticated analyst teams to analyze information than individual investors. The validity test results of Bartov et al. (2000) indicate that institutional ownership is a valid proxy for sophistication investors. Lasdi (2013) and numerous other studies have shown a link between AI and in the practice of profit manipulation. Callahan et al. (1997) measures the AI with bid-ask spread. The basis of sophistication investor level selection and AI, in addition to its role in explaining the relationship between earnings aggressiveness to stock trading is further investigated by Bhattacharya et al. (2003).

The relevant control variables involved in this study refers to modeling of control variables in Bhattacharya et al. (2003) and Lamoreaux et al. (2015). Based on Bhattacharya et al. (2003), the control variables included are: Income smoothing (earnings smoothing) and loss-avoidance (loss-avoidance). Earning smoothing is measured by time-series correlation over the last 5 years between scaled accrual changes and cash flow changes. Cash flow is obtained as a result of reduced operating profit with scaled accrual. The more ngatif correlation value obtained the higher earning smoothing in the company. Loss-avoidance is measured by the ratio of the number of years that have small positive earnings minus the number of years that have small negative earnings against the amount of both. Small positive earnings and small negative earnings are obtained if net income is scaled with total assets of the previous year (lag total asset) is 0% s/d 1% and 0% s/d −1%. Loss-avoindance calculations use time-series data over the last 5 years. The greater the value of the

ratio is the higher loss-avoindance in the firm. While based on the model Lamoreaux et al. (2015), the control variables included are: equity as a company's capital capacity, financial risk, as measured by financial leverage, namely debt to equity ratio (DER), and total assets as a representation of company size that measures the company's operational capacity. Financial risk is a risk borne by the shareholder above the company's basic business risk resulting from the use of financial leverage (Brigham and Houston, 2006).

Based on literature review, the hypothesis that can be proposed in this study are as follows:

1. EA has a negative effect on stock trading.
2. The negative effect of earnings aggressiveness on stock trading is stronger in companies whose IS level is high than in companies with low IS levels.
3. The negative effect of earnings aggressiveness on stock trading is weaker in firms with high AI levels than in companies with low AI levels.

3. RESEARCH METHODS

This research uses survey-explanatory research design with quantitative approach that aims to explain the relationship between variables through hypothesis testing based on survey data between inter-companies and time (panel data). The relationship described and tested is the effect of earnings aggressiveness on stock trading dimensions: MRS and TVA based on statistical analysis.

The data used in this study is secondary data, i.e., data that is processed and obtained by researchers from the company and from outside the company related to the problems studied. The data sources used are audited company financial statements.

In this study, the population studied were all manufacturing companies that went public on the Indonesia Stock Exchange, which were 143 companies divided into basic and chemical industry sub-sectors (65 companies), various industries (41 companies), and consumer goods industries (37 company). Sampling technique used is probability sampling, which is stratified random sampling (random stratified sampling), based on subsector strata in manufacturing sector. With the sample size of the company as many as 59 companies, then during the period of 2012–2016 (5 years), the total sample size is 295 units of analysis.

Documentation techniques are used to determine the symptoms of events that occur in the location of research. Documentation and literature study is a technique of collecting secondary data through written sources related to the focus of the problems studied, whether they are theoretical studies or documents that exist on the subject of research, such as regulations, minutes of meetings, and other documents on the company.

The analysis method used multiple linear regression analysis. In the regression analysis in addition to measuring the strength of the relationship between two or more variables, it also shows the direction of the relationship between the causal variable and the result variable. In this research, causal variables are independent variable, moderating variable, and interaction variable between independent variable and moderating variable, whereas the result variable is the dependent variable. The affected variable assumed random means having a probabilistic distribution, while the cause variable is assumed to have a fixed value (Ghozali, 2005).

Based on conceptual framework, structural model formulation which is analyzed to test hypothesis in this research is as follows:

Model for hypothesis test 1:

$$MRS=b_{01}+b_{11}EA+b_{21}ES+b_{31}LA+b_{41}EQUITY+b_{51}DER+b_{61}ASSET+e_1$$

$$TVA=b_{02}+b_{12}EA+b_{22}ES+b_{32}LA+b_{42}EQUITY+b_{52}DER+b_{62}ASSET+e_2$$

Model for hypothesis test 2:

$$MRS=b_{03}+b_{13}IS+b_{23}EA+b_{33}EA*IS+b_{43}ES+b_{53}LA+b_{63}EQUITY+b_{73}DER+b_{83}ASSET+e_3$$

$$TVA=b_{04}+b_{14}IS+b_{24}EA+b_{34}EA*IS+b_{44}ES+b_{54}LA+b_{64}EQUITY+b_{74}DER+b_{84}ASSET+e_4$$

Model for hypothesis test 3:

$$MRS=b_{05}+b_{15}AI+b_{25}EA+b_{35}EA*AI+b_{45}ES+b_{55}LA+b_{65}EQUITY+b_{75}DER+b_{85}ASSET+e_5$$

$$TVA=b_{06}+b_{16}AI+b_{26}EA+b_{36}EA*AI+b_{46}ES+b_{56}LA+b_{66}EQUITY+b_{76}DER+b_{86}ASSET+e_6$$

Before the regression analysis is done, first classical assumption test is performed. The classical assumption test consisted of normality, multicollinearity and heteroscedasticity tests used to ensure that the data used was normally distributed and in the model did not contain multicolonierity and heteroscedasticity.

In the regression analysis also determined the coefficient of determination used to determine how big the variant of the variables can be explained by the variable causes (in percent). The coefficient of determination used in this study is the adjusted R^2 coefficient, which is the coefficient of determination that adjusts the R^2 calculation by considering the number of causal variables in the model. If the coefficient of determination is close to 1, it indicates that the variation of the variables as a result can be explained by all causal variables.

4. RESULTS AND DISCUSSION

4.1. Results

Regression analysis used in this study is multiple linear regressions and Moderated Regression Analysis to know the effect of EA on stock trading that is MRS and TVA with IS and AI as moderator. Regression analysis results can be seen in the following Table 1.

As can be seen in the Table 1, from the analysis results obtained by adjusting coefficient of Adjusted R^2 (Adjusted R^2 or Adjusted

R^2) of 97.6%. That is, the influence of EA simultaneously to MRS is 97.6%. The magnitude of this effect, indicating the magnitude of MRS variation that can be explained by the model of EA. The residual MRS variation not explained by the model, i.e., 1 - Adj R^2 = 2.4%, explained by other factors not examined.

The significance of the influence of EA simultaneously to MRS as measured from Adjusted R^2 is tested by F-test. From the significance test results obtained value Fcount = 2015.372 which is bigger than Ftabel = 2.130 (ftable value at error level 5% and degrees of freedom db1 = k = 6, db2 = nk-1 = 295-6-1 = 288) indicating that EA has significant effect simultaneously on MRS at 5% error level. The significance of F-test results is also shown by P-value (Sig.) = 0.000 < (α = 0.05).

Based on regression analysis result, statistic of regression equation as follows:

The regression equation showing the effect of EA on MRS can be seen in the regression equation below. Constant b0 statistical values and regression coefficients b1 s/d b6 are obtained from unstandardized coefficients as can be seen in the Table 2.

$$MRS=b_{01}+b_{11}EA+b_{21}ES+b_{31}LA+b_{41}EQUITY+b_{51}DER+b_{61}ASSET+e_1$$

$$MRS=-0.175-0.251EA+0.006ES-0.002LA+0.015EQUITY+0.034DER+0.010ASSET+e_1$$

The response of change MRS due to changes in EA is negative. The results of this analysis indicate that the higher the EA, the lower the MRS.

The results of testing the influence of EA partially to MRS can also be seen in the Table 2. The significance of the influence of EA partially to MRS as measured by regression coefficient b1 is tested by t-test. From the results of significance test obtained value of t count for variable of EA = −14.301. The absolute value of t arithmetic is greater than the absolute value of ttable = 1.968 (ttable value at 5% error level of 2-sided test type and degree of nk-1 = 295-6-1 = 288) indicating that EA partially significant negative effect on MRS at 5% error level. The significance of the t-test results is also shown by P = 0.000 which is smaller than α = 0.05.

Based on the above test results, the first research hypothesis, for MRS, received at a significance level of 5%. The results showed that:

EA significantly negatively influences the MRS.

As can be seen in the Table 3, from the analysis results obtained adjusted coefficient of Adjusted R^2 (Adjusted R^2 or Adjusted R^2) of 46.7%. That is, the amount of influence of EA simultaneously to TVA = 46.7%. The amount of these influences indicating the amount of variation in TVA which can be explained by the model of EA. The remaining variations of TVA are not explained by the model, i.e., 1 - Adj R^2 = 53.3%, explained by other factors not examined.

The significance of influence of EA simultaneously to TVA as measured from Adjusted R^2 is tested by F-test. From result of significance test obtained value Fhitung = 43.913 bigger than Ftabel = 2.130 (Ftabel value at error level 5% and degrees of freedom db1 = k = 6, db2 = nk-1 = 295-6-1 = 288) indicating that EA has significant effect simultaneously on TVA at 5% error level. The significance of F test results is also shown by P-value (Sig.) = 0.000 < (α = 0.05).

Based on regression analysis result, statistic of regression equation as follows:

The regression equation showing the effect of EA on TVA can be seen in the regression equation below. Constant b_0 statistical values and regression coefficients b1 s/d b6 are obtained from unstandardized coefficients as can be seen in the Table 4.

$$TVA=b_{02}+b_{12}EA+b_{22}ES+b_{32}LA+b_{42}EQUITY+b_{52}DER+b_{62}ASSET+e_2$$

$$TVA=-9.225+8.005EA+4.517ES+0.435LA+1.053EQUITY-0.673DER-0.167\ ASSET+e_2$$

The response to changes in TVA due to changes in EA is positive. The results of this analysis indicate that the higher the EA, the higher TVA.

Table 1: Results of simultaneous effect testing on model 1a using F-test

R	R^2	Adjusted R^2	F	Sig.
0.988[a]	0.977	0.976	2015.372	0.000[b]

Table 2: Results of partial effect testing on model 1a using t-test

Model	Unstandardized coefficient	t	Sig.
Constant	−0.175	−12.310	0.000
EA	−0.251	−14.301	0.000
ES	0.006	0.627	0.031
LA	−0.002	−9.105	0.000
EQUITY	0.015	9.116	0.000
DER	0.034	16.279	0.000
ASSET	0.010	16.397	0.000

Table 3: Results of simultaneous effect testing on model 1b using F-test

R	R^2	Adjusted R^2	F	Sig.
0.691[a]	0.478	0.467	43.913	0.000[b]

Table 4: Results of partial effect testing on model 1b using t-test

Model	Unstandardized coefficient	t	Sig.
Constant	−9.225	−3.077	0.002
EA	8.055	2.169	0.031
ES	4.517	2.321	0.021
LA	0.435	9.359	0.000
EQUITY	1.053	3.099	0.002
DER	−0.673	−1.506	0.033
ASSET	−0.167	−1.316	0.009

The results of testing the influence of EA partially on TVA can also be seen in the Table 4. The significance of the effect of EA partially on TVA as measured by regression coefficient b1 is tested by t-test. From the results of significance test obtained value of t count for the variable of EA = 2.169. The absolute value of t arithmetic is smaller than the absolute value of t-table = 1.968 (t-table value at error level 5% of 2-sided test type and degree of nk-1 = 295-6-1 = 288) indicating that EA partially significant positive effect on TVA at 5% error level. The significance of the ttest results is also shown by P = 0.031 which is smaller than $\alpha = 0.05$.

Based on the above test results, the first research hypothesis, for TVA, is rejected at a significance level of 5%. The results showed that:

EA has a significant positive effect on TVA.

As can be seen in the Table 5, from the analysis results obtained adjusted coefficient of Adjusted R^2 (Adjusted R^2 or Adjusted R^2) of 98.0%. That is, the magnitude of the influence of EA simultaneously to MRS with IS as a moderator is 98.0%. The magnitude of the effect, indicating the magnitude of MRS variation that can be explained by the model of EA with IS as a moderator. The residual MRS variation not explained by the model, i.e., 1 - Adj R^2 = 2.0%, explained by other factors not examined.

The significance of the effect of EA simultaneously on MRS with IS as moderator is measured from Adjusted R^2 is tested by F test. From the significance test results obtained Fcount = 1769,000 greater than Ftable = 1.971 (Ftable value at 5% error level and db1 = k = 8, db2 = nk-1 = 295-8-1 = 286) indicating that EA with IS as moderating moderator significant simultaneously to MRS at 5% error level. The significance of F test results is also shown by P-value (Sig.) = 0.000 < ($\alpha = 0.05$).

Based on regression analysis result, statistic of regression equation as follows:

The regression equation showing the influence of EA to MRS with IS as moderator can be seen in regression equation below. Constant b0 statistical values and regression coefficients b1-b8 are obtained from unstandardized coefficients as can be seen in the Table 6.

$$MRS=b_{03}+b_{13}IS+b_{23}EA+b_{33}EA*IS+b_{43}ES+b_{53}LA+b_{63}EQUITY+b_{73}DER+b_{83}ASSET+e_3$$

$$MRS=-0.213+0.030IS-0.012EA-0.337EA*IS+0.015ES-0.002LA+0.016EQUITY+0.037DER+0.010ASSET+e_3$$

Response changes MRS due to changes in EA in line with the response due to changes in EA moderated by IS (EA*IS), which are both negative direction. The results of this analysis indicate that the higher the EA, as well as the higher the interaction between EA*IS, the lower the MRS.

The results of testing the influence of EA, as well as the influence of EA*IS partially to MRS can also be seen in the Table 6. The significance of the influence of EA and the influence of EA*IS

Table 5: Results of simultaneous effect testing on model 2a using F-test

R	R^2	Adjusted R^2	F	Sig.
0.990[a]	0.980	0.980	1769.275	0.000[b]

Table 6: Results of partial effect testing on model 2a using t-test

Model	Unstandardized coefficient	t	Sig.
Constant	−0.213	−14.595	0.000
IS	0.030	6.931	0.000
EA	−0.012	−0.323	0.047
EA*IS	−0.337	−6.814	0.000
ES	0.015	1.702	0.009
LA	−0.002	−9.986	0.000
EQUITY	0.016	9.940	0.000
DER	0.037	18.113	0.000
ASSET	0.010	16.535	0.000

EA*IS: Earning aggressivenesss moderated by investor sophistication

partially to MRS as measured from regression coefficient b2 and b3 is tested by t-test. From the results of significance test obtained value of t count for the variable of EA = −0.323. The absolute value of t arithmetic is smaller than the absolute value of ttable = 1.968 (ttable value at error level 5% of 2-sided test type and degree of nk-1 = 295-8-1 = 286) indicating that EA negatively but not significantly partially to MRS at 5% error level. No significant t-test results are also shown by P = 0.747 which is > $\alpha = 0.05$. While the value of titung for interaction variable between EA*IS = −6.814. The absolute value of t arithmetic is greater than the value of ttable = 1.968 indicating that the EA*IS has a partially significant negative effect on the MRS at the 5% error rate. The significance of the t-test results is also shown by P = 0.000 which is smaller than a = 0.05.

Based on the above test results, the second research hypothesis, for MRS, received at a significance level of 5%. The results showed that:

EA has a negative but not significant effect on MRS, while interaction of aggressiveness with IS has significant negative effect on MRS. Thus, the negative effect of earnings aggressiveness on MRS is stronger in firms with high IS levels than in companies with low IS rates.

As can be seen in the Table 7, from the analysis results obtained adjusted coefficient of Adjusted R^2 (Adjusted R^2 or Adjusted R^2) of 46.7%. That is, the amount of influence of EA simultaneously to TVA with IS as moderator = 46.7%. The magnitude of the effect, indicating the amount of variation TVA which can be explained by the model of EA with IS as a moderator. The remaining variations of TVA are not explained by the model, i.e., 1 - Adj R^2 = 53.3%, explained by other factors not examined.

The significance of the influence of EA simultaneously to TVA with IS as moderator as measured from Adjusted R^2 is tested by F-test. From the significance test results obtained value Fhitung = 33.152 which is bigger than Ftabel = 1.971 (Ftable value at 5% error level and db1 = k = 8, db2 = nk-1 = 295-8-1 = 286) indicating

that EA with IS as moderator has significant effect simultaneous to TVA at 5% error level. The significance of F test results is also shown by P-value (Sig.) = 0.000 < (α = 0.05).

Based on the above test results, the second research hypothesis, for MRS, received at a significance level of 5%. The results showed that:

EA has a negative but not significant effect on MRS, while interaction of aggressiveness with IS has significant negative effect on MRS. Thus, the negative effect of earnings aggressiveness on MRS is stronger in firms with high IS levels than in companies with low IS rates.

The regression equation showing the influence of EA on TVA with IS as moderator can be seen in the regression equation below. Constant b_0 statistical values and regression coefficients b1 s/d b8 are obtained from unstandardized coefficients as can be seen in the Table 8.

$$TVA=b_{04}+b_{14}IS+b_{24}EA+b_{34}EA*IS+b_{44}ES+b_{54}LA+b_{64}EQUITY+b_{74}DER+b_{84}ASSET+e_4$$

$$TVA=-10.766+0.673IS+12.934EA-8.717EA*IS+5.197ES+0.418LA+1.228EQUITY-0.768DER-0.235ASSET+e_4$$

The response to the change in TVA due to changes in EA is positive, i.e., in opposite direction with negative response due to changes in EA*IS. The results of this analysis indicate that the higher the EA, the higher TVA. While the higher the interaction between EA*IS, then the lower TVA.

The results of testing the influence of EA, as well as the influence of EA*IS partially to TVA can also be seen in the Table 8. The significance of the influence of EA and the influence of EA*IS partially to TVA as measured from regression coefficient b_2 and b_3 is tested by t-test. From the results of significance test obtained t count value for the variable of EA = 1.497. The absolute value of t arithmetic is smaller than the absolute value of ttable = 1.968 (ttable value at 5% error level of 2-sided test type and degree of nk-1 = 295-8-1 = 286) indicating that EA have a positive but not partially significant effect on TVA at 5% error level. No significant t-test results are also shown by P = 0.136 which is > α = 0.05. While the value of titung for interaction variable between EA*IS = −0.772. The absolute value of t arithmetic is smaller than the value of ttable = 1.968 indicating that the EA*IS has a negative but not partially significant effect on TVA at 5% error level. The significance of the t-test results is also shown by P = 0.441 which is > α = 0.05.

Table 7: Results of simultaneous effect testing on model 2b using F-test

R	R^2	Adjusted R^2	F	Sig.
0.694[a]	0.481	0.467	33.152	0.000[b]

Table 8: Results of partial effect testing on model 2b using t-test

Model	Unstandardized coefficient	t	Sig.
Constant	−10.766	−3.226	0.001
IS	0.673	0.688	0.002
EA	12.934	1.497	0.036
EA*IS	−8.717	−0.772	0.041
ES	5.197	2.579	0.010
LA	0.418	8.646	0.000
EQUITY	1.228	3.380	0.001
DER	−0.768	−1.649	0.010
ASSET	−0.235	−1.700	0.009

EA*IS: Earning aggressivenesss moderated by investor sophistication

Based on the above test results, the second research hypothesis, for TVA, is rejected at the 5% significance level. The results showed that:

EA has positive but not significant effect on TVA, while interaction of aggressiveness with IS has negative but not significant effect on TVA. Thus, the negative effect of earnings aggressiveness on TVA is stronger in companies whose IS level is higher than in firms with low IS levels.

As can be seen in the Table 9, from the analysis results obtained by adjusting coefficient of Adjusted R^2 (Adjusted R^2 or Adjusted R^2) of 97.7%. That is, the influence of EA simultaneously to MRS with AI as moderator is 97.7%. The magnitude of the effect, indicating the magnitude of MRS variation that can be explained by the model of EA with AI as a moderator. The remaining variation of MRS not explained by the model, that = 1 - Adj R^2 = 2.3%, explained by other factors not examined.

The influence of EA is simultaneously significance on MRS with AI as moderator as measured from Adjusted R^2 is tested by F test. From the significance test results obtained value Fcount = 1533,216 larger than Ftable = 1.971 (Ftable value at 5% error level and db1 = k = 8, db2 = nk-1 = 295-8-1 = 286) indicating that EA with AI as moderating moderator significant simultaneously to MRS at 5% error level. The significance of F-test results is also shown by P-value (Sig.) = 0.000 < (α = 0.05).

Based on regression analysis result, statistic of regression equation as follows:

The regression equation showing the effect of EA on MRS with AI as moderator can be seen in the regression equation below. Constant b0 statistical values and regression coefficients b1 s/d b8 are obtained from unstandardized coefficients as can be seen in the Table 10.

$$MRS=b_{05}+b_{15}AI+b_{25}EA+b_{35}EA*AI+b_{45}ES+b_{55}LA+b_{65}EQUITY\ b_{75}DER+b_{85}ASSET+e_5$$

$$MRS=-0.181-0.076AI-0.284EA+1.021EA*AI+0.011ES-0.002LA+0.016EQUITY+0.033DER+0.009ASSET+e_5$$

The response of MRS change due to changes in EA is negative, i.e., in opposite direction with positive response due to changes in EA*AI. The results of this analysis indicate that the higher the EA, the higher the MRS. While the higher the interaction between EA*AI, the higher the MRS.

Tabel 9: Results of simultaneous effect testing on model 3a using F-test

R	R^2	Adjusted R^2	F	Sig.
0.989[a]	0.977	0.977	1533.216	0.000[b]

Table 10: Results of partial effect testing on model 3a using t-test

Model	Unstandardized coefficient	t	Sig.
Constant	−0.181	−12.630	0.000
AI	−0.076	−0.904	0.037
EA	−0.284	−7.414	0.000
EA*AI	1.021	1.006	0.015
ES	0.011	1.144	0.004
LA	−0.02	−9.195	0.000
EQUITY	0.026	9.134	0.000
DER	−0.167	14.859	0.000
ASSET	0.009	14.673	0.000

The results of testing the influence of EA, as well as the influence of EA*AI partially to MRS can also be seen in the Table 10. The significance of the influence of EA and the influence of EA*AI partially to MRS as measured by regression coefficient b2 and b3 are tested by t-test. From result of significance test obtained by tcount value for variable of EA = −7.414. The absolute value of t arithmetic is smaller than the absolute value of ttable = 1.968 (ttable value at error level 5% of 2-sided test type and degree of nk-1 = 295-8-1 = 286) indicating that EA partially significant negative effect on MRS at 5% error level. The significance of the t-test results is also shown by P = 0.000 which is smaller than $\alpha = 0.05$. While the value of titung for interaction variable between EA*AI = 1.006. The absolute value of t arithmetic is smaller than the value of ttable = 1.968 indicating that the EA*AI has a positive but not partially significant effect on MRS at 5% error level. The insignificant t-test results are also shown by P = 0.315 which is > $\alpha = 0.05$.

Based on the above test results, the third research hypothesis, for MRS, is rejected at the 5% significance level. The results showed that:

EA has a significant negative effect on MRS, while the interaction of earnings aggressiveness with AI has positive but not significant effect on MRS. Thus, the negative effect of earnings aggressiveness on MRS is weaker in firms with high AI levels than in firms with low AI levels.

As can be seen in the Table 11, from the analysis results obtained Adjusted R^2 or Adjusted R^2 = 59.4%. That is, the amount of influence of EA simultaneously to TVA with AI as moderator = 59.4%. The magnitude of these influences, indicating the amount of variation in TVA that can be explained by the model of EA with AI as moderator. The remaining variations of TVA are not explained by the model, i.e., 1 - Adj R^2 = 40.6%, explained by other factors not examined.

The significance of the influence of EA simultaneously to TVA with AI as moderator as measured from Adjusted R^2 is tested by F-test. From result of significance test obtained value Fcount = 54.796 bigger than Ftabel = 1.971 (Ftable value at 5% error level and db1 = k = 8, db2 = nk-1 = 295-8-1 = 286) indicating that EA with AI as moderator has significant effect simultaneous to TVA at 5% error level. The significance of F test results is also shown by P-value (Sig.) = 0.000 < ($\alpha = 0.05$).

Tabel 11: Results of simultaneous effect testing on model 3b using F-test

R	R^2	Adjusted R^2	F	Sig.
0.778[a]	0.605	0.594	54.796	0.000[b]

Table 12: Results of partial effect testing on model 3b using t-test

Model	Unstandardized coefficient	T	Sig.
Constant	−4.669	−1.756	0.008
AI	67.966	4.332	0.000
EA	36.542	5.144	0.000
EA*AI	−88.104	−4.714	0.000
ES	0.641	0.365	0.005
LA	0.463	11.268	0.000
EQUITY	0.159	0.495	0.021
DER	0.242	0.582	0.001
ASSET	0.129	1.076	0.003

Based on regression analysis result, statistic of regression equation as follows:

The regression equation showing the effect of EA on TVA with AI as moderator can be seen in the regression equation below. Constant b0 statistical values and regression coefficients b1 s/d b8 are obtained from unstandardized coefficients as can be seen in the Table 12.

$$TVA=b_{06}+b_{16}AI+b_{26}EA+b_{36}EA*AI+b_{46}ES+b_{56}LA+b_{66}EQUITY+b_{76}DER+b_{86}ASSET+e_6$$

$$TVA=-4,669+67,966AI+36,542EA-888.104EA*AI+0.641ES+0.463LA+0.159EQUITY+0.242DER+0.129ASSET+e_6$$

The response to the change in TVA due to changes in EA is positive, i.e., in opposite direction with negative response due to changes in EA*AI. The results of this analysis indicate that the higher the EA, the higher TVA. While the higher the interaction between EA*AI, then the lower TVA.

The results of testing the influence of EA, as well as the influence of EA*AI partially on TVA can also be seen in the Table 12. The significance of the influence of EA and the influence of EA*AI partially to TVA as measured by regression coefficient b2 and b3 is tested by t-test. From the results of significance test obtained value of t count for the variable of EA = 5,144. The absolute value of t arithmetic is greater than the absolute value of ttable = 1.968 (ttable value at 5% error level of 2-sided test type and degree of nk-1 = 295-8-1 = 286) indicating that EA partially significant positive effect on TVA at 5% error level. The significance of the t-test results is also shown by P = 0.000 which is smaller than $\alpha = 0.05$. While the value of titung for interaction variable between EA*AI = −4.714. The absolute

value of t arithmetic is greater than the value of ttable = 1.968 indicating that the EA*AI has a negative but not partially significant effect on TVA at 5% error level. The significance of the t-test results is also shown by P = 0.000 which is smaller than $\alpha = 0.05$.

Based on the above test results, the third research hypothesis, for TVA, is rejected at the 5% significance level. The results showed that:

EA has a significant positive effect on TVA, while interaction of earnings aggressiveness with AI has a significant negative effect on TVA. Thus, the negative effect of earnings aggressiveness on TVA is stronger in firms with high AI levels than in companies with low AI levels.

3.1. Discussion

The empirical research findings show that there is a difference of EA effect on MRS and TVA, either by incorporating IS and AI or not. EA tends to decrease MRS, but increases TVA. While sophistication investors are strengthen the negative effects of aggressiveness on MRS and TVA. AI weakens the negative effects of aggressiveness on MRS, but reinforces the negative effects of aggressiveness on TVA.

The negative influence of EAs on MRS supports the results of Bhattacharya (2003) and Khaddafi (2014) research. While moderation effects of IS and AI in weakening and strengthening the negative effects of aggressiveness on MRS in accordance with the results of research Bartov (2000) and Lasdi (2013).

5. CONCLUSION

Based on the principal problems and research results can be formulated the following conclusions:

1. EA significantly negatively influences the MRS, but has a significant positive effect on TVA.
2. EA has a significant negative effect on MRS, while interaction of aggressiveness with IS has a significant negative effect on MRS. Thus, the negative effect of earnings aggressiveness on MRS is stronger in firms with high IS levels than in companies with low IS rates. Earnings aggressiveness has a significant positive effect on TVA, while interaction of aggressiveness with IS earnings significantly negative effect on TVA. Thus, the negative effect of earnings aggressiveness on TVA is stronger in companies whose IS level is higher than in firms with low IS levels.
3. EA has a significant negative effect on MRS, while the interaction of earnings aggressiveness with AI has a significant positive effect on MRS. Thus, the negative effect of earnings aggressiveness on MRS is weaker in firms with high AI levels than in firms with low AI levels. While EA has a significant positive effect on TVA, while interaction of aggressiveness earnings with AI has significant negative effect on TVA. Thus, the negative effect of earnings aggressiveness on TVA is stronger in firms with high AI levels than in companies with low AI levels.

Referring to the research results and conclusions, here are some suggestions.

1. In improving the achievement of MRS, the investor should improve its ability to detect EAs by issuers and minimize the AI between investors and issuers and not to make stock trading activity as a sign of increasing MRS.
2. For further research, it is suggested to examine other factors that influence stock trading, both MRS and TVA, beyond earnings aggressiveness, IS, AI, earning smoothing, loss-avoidance, equity, financial risk, and assets. Similarly, further investigate the factors that cause why EAs tend to increase TVA, as well as why AI reinforces the negative effects of aggressiveness on TVA.

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