

EARNING MANAGEMENT FORECAST ERRORS, ACCRUAL, AND ENVIROMENT UNCERTAINTY ON INDONESIA STOCK EXCHANGE LISTED FIRMS

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Abstract— The paper' purpose is examining the correlation between earning management forecast errors to accrual using environment uncertainty as moderating variable and firm size as control variable. Sampling method used is purposive sampling method. This paper uses secondary data of 144 Indonesia Stock Exchange non-financial listed firms over 2011-2016. The result indicates environment uncertainty moderates the correlation between prediction error and accrual ($p= 0.000$; $p<0.05$). Step 1 regression has determination coefficient (R^2) as 0,031 while Step 2 of regression has 0,105 R^2 .

Keywords— Profit Management, accrual, environment uncertainty.

1 INTRODUCTION

Recently decision making for the stakeholders who use financial statement is notable for the firm's future. It is vital to evaluate firm's capability in term of earning potential by obtaining information regarding financial position, earning, and cash flow. Moreover there are some additional information as management forecast, press release, conference and analytical meeting, internet site, and the other communication channels. Yet financial reporting more focus delivering mandatory financial information and only publishes some part of voluntary disclosure such as earning management prediction (Hirst et al. 2008). The higher level of opportunity tends to led by higher asymmetric information (Cormier, 2013). There will be a condition where earning management gets uncertainty higher for investors regarding cashflow distribution in the future, which will create asymmetric information between well informed inverstors with less informend investors (Bhattacharya et al, 2012). Indonesia Stock Exchange (BEI) reported phenomenon on 2015. It found miss reporting in the INVS (Inovasi) financial report over periode September 2014. INVS practically has need-to-be-revised eight items in their financial statement regarding information disclosure date 25 February 2015. BEI requests INVS to revise value of fixed asset, earning per share, business segment report, category of financial instrument, and liability in business segment information. Besides, BEI states INVS management do miss reporting item cash payment to the employee and receiving (payment) of related party's debt in cashflow statement. On the first semester of 2014 employee salary payment is IDR 1.9 trillion. Meanwhile on third quartal salary payment only reach IDR 59 Billion.

INVS has revised their financial statement over period January to September 2014. In its revised version, some value on the

report has changed, one of them is declining on fixed asset to IDR 1.16 trillion from IDR 1.45 trillion. Inovisi also report their nett earning seems higher by reporting its current year profit (<http://www.bareksa.com>, posted on: February 25 2015, accessed on: November 20 2017, at 01.30 PM (GMT + 7)). Another example of report manipulation practiced by Bakri Group as reported by Indonesia Corruption Watch (ICW). Bakri Group allegedly sales its three coal mining companies to Directorate General of Taxation. ICW presumes reporting manipulation conducted by Bumi Resources Inc., this firm suffered loss over period 2003-2008 and lead to state loss as US\$ 620.49 millions. According to ICW investigation, Bumi Resource Inc manipulates their sales report over period 2003-2008 by decreasing their sales US \$ 1.06 billion lower that the real value. It creates state loss US\$ 143.29 million. (www.tempo.com, Sunday November 20 2017). Earning management forecast is voluntary disclosure reporting to provide information related to firm expected earning which represents essential process during voluntray disclosure by determining manager or setting expected market earning, avoid litigation worries, and affect firm' reputation in term of transparency and and reporting accuracy (Hirst et al. 2008). Francis et al. (2008) postulate that more profitable firms tend to do higher voluntary disclosure reporting than less profitable one. Whilst McNichols (1989) finds that earning management forecast bears forecast errors wich relate to historical stock return, where managers do not put the information regarding stock price to profit forecast efficiently. This errors may appear from manager valuation errors concerning to firm's business prospect. Moreover Guojin Gong et al. (2009) state that earning management forecast do not ease accrual price setting. This paper lead by Ratna, Munawar dan Elvin (2010) paper which concerning the correlation between earning management forecast errors and accrual and using environemtn uncertainty as moderating variable on Indonesia Stock Exchange listed firms over 2005-2009. This paper is repicating research of Ratna, Munawar dan Elvin (2010) on Indonesia Stock Exchange listed firms over 2011-2016.

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2 LITERATURE REVIEW AND HYPOTHESIS

2.1 Firm Theory

Firm's ultimate aim is to pursue the profit. To do so the firms need to decide most appropriate decision concerning to finance, technology, and demands. Competitive firms assumed as the firm which could sell the stock as many as they desired at the price market without affecting the price. Moreover efficient firms operate their business at any level of their production, and minimize the production cost at any level of production. Firm theory stated environment uncertainty bears limited constraint for the firms and will affect firm's strategies and decision making as stated by Child (1972) that environment stand as critical constraint for effective structural provision. Furthermore recent business atmosphere creates higher environment uncertainty which become an obstacle for planning and controlling process. Environment uncertainty also defined as either individual confine concerning to calculate probability errors or success of decision made (Duncan, 1972). Environment uncertainty also defined as situation where an individual constraint in predicting the environment and willing to overcome the constraint (Luthans, 1995). According to Fisher (1996) at higher environment uncertainty people experience hardship to predict failure and success of the decision has been made. Firms will not running well without paying attention to the business environment. Those various environment conditions used to adapt level of firm performance (Jensen and Meckling, 1976). It can be stated environment affects the firm strategies and decision making to maximize profit.

2.2 Environment Uncertainty

Daft (2002:99) propose environment uncertainty as the condition where manager face constraint regarding the limited information of business environment which normally will be used to forecasting. Meanwhile Astuti (2007) state environment uncertainty as people incapability to predict precisely whole social and physical factors may affect decision making behavior of firms stakeholders. Noreen (2000:9) postulates environment uncertainty affects managerial accounting practice. Concerning to the environment uncertainty the consumers will take the most advantages since the firms will compete to tightly so as will lower the price and higher product's quality. Fundamentally environment uncertainty is external condition that may affect firm operational in term of managerial planning and controlling. In Indonesia case the business environment is unpredictable due to political and economical issues which will affect business trading instability.

2.3 Firm Size

Firm size is a reflection of the firm. According to Sukmawati et al (2014) the comparison of the firm size will affect the quality of firm profit. However, based on pecking order theory big firms have lower asymmetric information discrepancy compare to small (Huang dan Song 2006). It implies where big firms acquire smaller equity price than what small firms bear, so as those big firms use equity more often compared to small firms. Ahmed S. Alanazi et al. (2011) postulate that through equity usage of big firms, the management side will have better profit quality than small firms have. It explains big firms tend to do longer business than small firm do. Firm size indicates the

total assets of the firms. The bigger assets firms have a bigger size of those firms. The size of the assets provides the signal of the future of the firms. In other words, the firms' assets will reflect how bright the future of the firms is. The firms' size could be in the form of the human resource the firms have or total assets of the firms. According to the total assets that firms have, they provide a picture of the firms in the future. Total assets or on activa side are the firms economic resources which still provide the economic benefits in the future. Ahmed S. Alanazi et al. (2011) and Zhou dan Lao (2012) state that firms size does affect firms performance yet insignificantly affected. Some researches on the relationship between firms size and accrual quality proxied by total assets as conducted by Sukmawati et al (2014). Firms size defined as the reflection of how small and big the firms is which is measured by the natural logarithm of the total activa. In this context, big firms will elevate financial performance so as profit management practices are no longer required.

2.4 Hypothesis Development

Earning management, forecast error and accrual
Ratna, Munawar and Elvin (2010) propose there is positive correlation between earning management forecast errors for next year to current year accrual. Means next year's earning management forecast errors which is higher (low) if current year accrual relatively higher (low) and it is align to Guojin Gong et al. (2009). Meanwhile Maureen Nichols (1989) finds that earning management forecast errors relate to historical stock return, where manager do not put information related to stock price into earning forecast. This errors may come up from the miss valuation the manager done regarding firm's business prospect. according to above discussion, the hypothesis would be:

H1: there is positive correlation between earning management forecast errors to accrual.

Environment Uncertainty and accrual

Guojin Gong et al. (2009) show positive correlation between earning management forecast errors to accrual is higher for the firms which face higher operational environment uncertainty. Firms which face higher environment uncertainty relatively face easily-to-change business condition which lead manager to more depended on the managerial forecast to create accrual. So as manager's valuation of business prospect which known through earning forecast is more affect accrual under higher environment uncertainty. Whilst managers who face higher uncertainty, tend for make more errors while forecasting the business prospect. Concerning to accounting information system Yubiharto (2003) reveals sophisticated managerial accounting information system lead important role to elevate managerial performance. This paper willing to examine strong and positive correlation between earning management forecast errors and accrual in the high environment uncertainty and the hypothesis is:

H2: positive correlation between earning management forecast errors to accrual is stronger for the firm which operate in higher environment uncertainty.

3 RESEARCH METHOD

3.1. Population and Sample

Population is the whole possibility of people, things, and the other measurement which could be investigation object (Suharyadi dan Purwanto 2015:6). The population of this paper is Indonesia Stock Exchange listed firms over 2011-2016. The total of population is 530 firms.

While the sample is the certain part of the population which could be investigation object (Suharyadi dan Purwanto 2015:6). This paper sample is Indonesia Stock Exchange listed firms over 2011-2016 using purposive sampling as sampling method by using some criteria to determined the sample. The criteria are:

1. Non financial firms which disclose earning forecast on Indonesia Stock Exchange over 2011 -2016.
2. Firms which consistently report complete financial statement during 2011-2016.
3. The firms which has profit during 2011-2016.

3.2 Type and Data Collection Procedure

This paper using secondary data obtained from Indonesia Stock Exchange (BEI) and Indonesia Stock Exchange statistic website (www.idx.co.id).

3.3. Analytical Statistic Method

This paper uses regression method, descriptive statistic also used for explaining the all variables used. The details of the used methods, explain as follow:

3.3. Descriptive Statistics Analysis

Descriptive statistics are used to analyze and present quantitative data to get a picture of the companies used as the research sample. By using descriptive statistics, it can be seen the mean, standard deviation, variance, maximum value, minimum value, sum, range, kurtosis and skewness (Ghozali, 2006). The minimum value is used to find out the smallest number of the data. The maximum value is used to find out the largest number of the data used. The mean value is used to find out the average value of the data in the sample. Standard deviation is used to find out how much the data in question varies from the average.

3.4 Hypothesis Testing

a) Model Reliability Test (F Test)

The reliability test of the model or F test is the initial stage to identify whether the model is a feasible or improper regression model or not to that is used to explain the effect of independent variables on the dependent variable. This test name is referred to as the F test, because it follows following the F distribution whose testing criteria are like One Way Anova. Using the SPSS software makes it easy to draw conclusions in this test. If the value of prob F is smaller than the error / error (alpha) level of 0.05, it can be conclude that the estimated regression model is feasible, whereas if the prob value of F is greater than the error level of 0.05 so it can be said that the estimated regression model is not feasible.

b) Regression Coefficient Test (t Test)

The T test in multiple linear regression is intended to test whether the parameters (regression coefficients and constants) that are thought to estimate the equation / multiple linear regression model are already the right parameters or

not. The meaning right here is that the parameters are able to explain the behavior of independent variables in influencing the dependent variable. The parameters estimated in linear regression include intercept (constant) and slope. Like the F test which is facilitated by the SPSS application, the t test can also be easily drawn to the conclusion. If the value prob T is smaller than the level of error (alpha) 0.05 (which has been determined) it can be said that the independent variable has a significant effect on the dependent variable, while if the value of prob T is greater than the error level of 0.05, it can be said that the independent variable does not have a significant effect on the dependent variable.

c) Coefficient of Determination

The coefficient of determination is the variation of the affect of independent variables on the dependent variable or can be called the proportion of the affect of all independent variables on the dependent variable. The coefficient of determination can be measured by the value of R-square or Adjusted R-Square. R-Square is used when there is only 1 independent variable, while Adjusted R-Square is used when there are more than one independent variables. In calculating the coefficient of determination, we prefer to use R-Square rather than Adjusted R-Square, even though there are more than one independent variable.

4 DATA ANALYSYS AND DISCUSSION

4.1 Sample description

The population of this paper is 530 listed firms at Indonesia Stock Exchange over period 2011-2016. The sampling method is purposive sampling to determiend the sample using determined criteria and table 4 presents the sampling process:

**Table 4.1
Sampling Process**

No	Criteria	Total
1	Non financial firm publish earning forecast on Indonesia Stock Exchange over period 2011 – 2016.	88
2	Firms over period 2011 – 2016, reporting profit during 2011 – 2016.	16
3	Firms which are constantly publish complete financial statement during December 31 2011 to 2016.	9
Total Observations (6 x 19)		114

Total firms fit to the criteria number one is 288 firms while the total firms fit to criteria number two is 116. The criteria number three put 19 firms which along with the pre-determined criteria. So as the final sample used is 19 firms out of 530 total population, means the paper has 114 observations.

4.2 Regression Model Assumption Testing

Normally regression models should meet some terms such as its residual should be distributed normally, it should have homogeneous residual variances, the residual should not have autocorrelate each other, and there is no multicollinearity among explanatories and thre result of classical assumption test presented as follows:

1. Residual Normality Testing

Residual normality testing conducted using Kolmogorov-Smirnov testing. It indicates normally distributed while the significant level is more than 0,05. The result presented on figure 1.

Figure 4.1
Residual Normality Testing

Figure 1. Residual Normality Testing
One-Sample Kolmogorov-Smirnov Test

		RESIDUAL
N		114
Normal Parameters ^{a,b}	Mean	.0084
	Std. Deviation	5.90E+13
Most Extreme Differences	Absolute	.429
	Positive	-.429
	Negative	-.258
Kolmogorov-Smirnov Z		4.581
Asymp. Sig. (2-tailed)		.065

a. Test distribution is Normal.
b. Calculated from data.

This paper has the residual distributed normally since the significant result is 0.065 means residual normality met, due to the score is bigger than 0.05.

4.3 Heteroscedasticity Testing

Variance of residual is supposed to be homogenous (homocedastic). If the assumption doesn't satisfied, it means the residual suffers from heterocedasticity. For detecting heteroscedasticity by using Glejser Testing. Residuals do not suffer from heteroscedasticity if independent variable significantly correlates to absolute value of residual. The result of the testing presented below:

Figure 4.2
Heteroscedasticity Testing

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.008	7.1E+12		.000	1.000
	Kesalahan prediksi	.000	1.1E+13	.000	.000	1.000
	Ketidak pastian lingkungan	.000	4.2E+10	.000	.000	1.000

a. Dependent Variable: ABSRES

It can be seen significancy of each independent variable is 1.000 means there is no heteroscedasticity detected.

4.4. Multicollinearity Testing

Multiple regression should not suffer from multicollinearity effect, the condition where two or more independent variables explain the same matter to the dependent variable. To test multicollinearity effect normally used VIF (Variance Inflation Factor) and its tolerance with test criteria: the model is clear for multicollinearity if the tolerance score is more than 0.01 and VIF score is less than 10 (Gozali, 2004). Based on the testing this paper variables is clear from multicollinearity as presented below:

Table 4.2

Tolerance Score and VIF

Variable	Tolerance	VIF
Forecast Errors	0,934	1,071
Environment Uncertainty	0,934	1,071

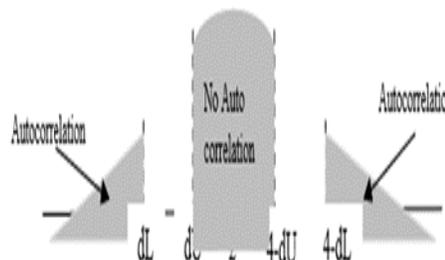
Source: Processed Primary Data.

Independent variables has tolerance score bigger than 0.01 and VIF are smaller than 10. So as could be conclude the model doesn't have multicollinearity issue.

4.5 Autocorrelation Testing

Auto correlation among residual tested by doing Durbin-Watson (DW) Test and the test can be explained as follows;

Figure 4.3
Autocorrelation Testing



The criteria for clear of autocorrelation is if the tested score located between dU to $4-dU$ (Suliyanto, 2011). Table score of sample $n = 114$ and independent variable number $k = 2$ using 5% level of significance are $dL = 1,6590$ and $dU = 1,7303$ so as $4-dL = 2,341$ and $4-dU = 2,2697$. Tested score of this paper is 1,970. This score located between $dU = 1,7303$ to $4-dU = 2,2697$, means this model is clear of autocorrelation effect.

4.6 Regression Analysis

This 4 table presents the result of hierarchical regression for this paper:

Table 4.
Regression Result

IN	2	Forecast errors	0,077	9,579	0,002	1,2E+13	1,112	0,269	Not significant
		Environment Uncertainty				1,3E+11	3,095	0,002	signifikan
	3	Forecast errors	0,105	14,628	0,000	-2,9E+13	-1,956	0,053	Not significant
		Environment Uncertainty				1,4E+10	0,285	0,776	Not significant
		Moderation				2,5E+11	3,825	0,000	signifikan

Source: Processed Secondary Data

explanatory for accrual. The result indicates: forecast errors do not correlate significantly to accrual ($p=0,060$; $p>0,05$). Hypotheses 1 does not supported. On the regression level 2, uncertainty is the second explanatory variable. Analytical result shows environment uncertainty correlate significantly to accrual ($p=0,002$; $p<0,05$). On the regression level 3, analyze the moderating effect of environment uncertainty to the correlation between forecast errors and accrual (interaction between forecast errors and environment uncertainty) include tin the analysis. The result shows environment uncertainty moderates correlation between forecast errors and accrual ($p=0,000$; $p<0,05$). On the regression level 1 R2score is 0,031 and on the regression level 3 R2changescore elevates to 0,105. It indicates that environment uncertainty strengthen the correlation between forecast errors and accrual. Means hypotheses 2 supported.

5 DISCUSSION

1.Environment Uncertainty of Earning Management Forecast and Accrual

On the regression level 1 forecast errors is the only one explanatory of accrual. The analysis is forecast errors do not correlate to accrual ($p=0.060$; $p> 0.05$). Hypothesis 1 is rejected. This rejection means there is no correlation between next year earning management forecast errors to current accrual. Means next year earning management forecast errors do not consist of higher errors (low) if current year accrual relatively higher (low). This does not align with Guojin Gong et al. (2009), Ratna, Munawar and Elvin (2010)which show positive correlation between next year earning management forecast errors to current accrual where next year earning management forecast errors do not consist of higher errors (low) if current year accrual relatively higher (low). Whilst this paper in line with Maureen Nichols (1989) reveals that earning management forecast related to historical stock put back, manager forget to put the stock price related information to profit forecast effectively. This error may appear because of manager valuation error for business prospect. Means even the next year management forecast will not affect accrual profit, neither managers reflect either good and bad next year accrual will it.

2.Environment Uncertainty, Earning Forecast, and Accrual

On the first stage of R2value is 0,031 and on the third stage of regression R2 value increase as 0,105. This indicates that environment uncertainty strengthen correlation between forecast errors and accrual. So as the Hypothesis 2 is accepted. The approval of Hypothesis 2 (H2) in line with previous research conducted by Guojin Gong et al. (2009) that reveals that there is positive correlation between earning management forecast errors to accrual is stronger on firm with higher level of operation related environment uncertainty.

Firms which run their business in high environment uncertainty condition face easily to change business atmosphere. This condition leads manager to lean on managerial forecast and estimation on accrual making process. Moreover managers tend to conduct business valuation because of environment uncertainty which easy to change as the solution for the firms in the future.

3.Environment Uncertainty, Earning Forecast, and Accrual with firm size as control variable

The rejection on hypothesis 1 (H1) and the acceptance of H2 (hypothesis 2) indicates that there is no correlation between error in earning forecast of the following year with current year accrual and environment uncertainty strengthen the correlation between error in forecasting and accrual. It means earning forecast error of following year doesn't have higher error (lower) if current year accrual relatively higher (lower) and vice versa. The rejection on hypothesis 1 (H1) and the acceptance of H2 (hypothesis 2) stipulates that when we take into account firm size as control variable doesn't affect the result on hypothesis 1 and hypothesis 2. It doesn't support Sukmawati et al (2014) that firm size affects quality if firm profits. Therefore, firms size is the independent variable and can't be classified as control variables which affect environment uncertainty, earning forecast to accrual.

6 CONCLUSION

This paper examines the correlation between management forecast errors and accrual using environment uncertainty as moderating variable. According to data analysis and discussion on previous chapter, the conclusions are:

- 1.Earning forecast errors do not correlate to accrual
- 2.Environment uncertainty strengthens the correlation between forecast errors and accrual, means environment uncertainty moderates the correlation between forecast errors and accrual.
- 3.By taking into account firm size to the model, it doesn't change the result of prior hypothesis testing.

7. LIMITATION

This paper bears some limits that need to consider for future research. The limits are:

- 1.This paper' sample classified as non financial so as the result cannot be generalized.
 - 2.The research period is only 5 years so as the result is so limit.
- According to discussion and conclusion above, this paper propose some suggestion:
- 1.The future research should take into account all sectors.
 - 2.The future research should take into account factors that do not include in this paper and should extend the research periods.

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