The Analysis of Earning management and Earning Response Coefficient: Empirical Evidence from Manufacturing Companies Listed in Indonesian Stock Exchange

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ABSTRACT : Research aims to obtain empirical evidence and to find clarity about the phenomenon of the influence of profitability, leverage, company scale, giving bonus to manager, company's working capital composition, and corporate ownership by manager, either simultaneously or partially on earning management and earning response coefficient. It is expected that research provide contributions to the development of accounting knowledge especially about positive accounting theory, agency theory, contracting cost theory and creative accounting practices, which are still rarely used as research materials in Indonesia. For practitioners outside the company, result of this research can be useful to detect earning management and earning response coefficient, as well as used as an instrument to assess the performance of company. Research method used is a census study. Type of research is descriptive-verification. Hypothesis testing involves some techniques such as Principal Model, multiple logistic regression analysis, and multiple regression analysis. Result of hypothesis testing shows that the variables of profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager, are influencing earning management and earning response coefficient either simultaneously or partially, and also in positive and significant manner. The magnitudes of simultaneous and partial influences are 78.5% and 86.1%. The variable of leverage has dominant influence on earning management, while earning response coefficient is dominantly influenced by variable of company scale. The implication of this research is that profitability, leverage, company scale, giving bonus to manager, company's working capital composition, and ownership of the company by manager are proven to contribute positively and significantly to Earning Management and Earning Response Coefficient.

KEYWORDS: *Earning Management, Earning Response Coefficient, Creative Accounting Theory, Positive Accounting Theory*

I. INTRODUCTION

Final statement is a method to ask for accountability to what has been done by manager with owner resources (Belkaoui, 1993). A parameter in final statement used to measure manager performance is earning. As stated in *Statement of Financial Accounting Concept* (SFAC) No. 1, earning information is highly attended in assessing performance or accountability of manager. Also, earning information helps owner or other parties in interpreting "*earning power*" of company in the future. Therefore, hereby, final statement which is designed as the alternative tool of accounting measurement is evaluated for the ability to predict events considered by decision maker. The users of financial statement may be such parties as manager, stockholder, creditor, government, company employee, supplier, consumer, and other members of community. All of them are assigned into two groups, internal and external. Any disputes between both internal and external groups can trigger a bitter conflict. Causes of this conflict can be elucidated as follows: (1) Manager insists on increasing their prosperity but stockholder also wants to increase their wealth; (2) Manager desires to have credit as huge as possible but with low interest, while creditor only provides credit based on company ability to pay; and (3) Manager attempts to pay tax as low as possible, while government insists to collect tax as high as possible. A medium of communication used to connect these parties is financial statement, which is usually made by manager as internal party to make account for their work result to external parties. In general, all properties of financial statement include balance sheet, income report, retained earning report, cash flow report, and notes related to financial statement. Almost all readers of financial statement only focus their view onto earning in the income report (Beaver et al, 1986; Ayres, 1994; Baiman, 1982). This trend is underlined by the fact that the performance of manager is measured by earning. However, it leads to *dysfunctional*

behavior (inappropriate behavior). One such behavior is earning management. Financial performance of manufacturing companies listed in Indonesia Stock Exchange (ISE) and their fund capitalization through capital market (*market capitalization*) in the last five years (2003-2007) have great contribution to the real sector, as shown in the following table.

Table 1
The Growth of Financial Performance of
Manufacturing Companies Listed in ISE for Period 2003-2007

No	Items	2003	2004	2005	2006	2007	Means	Growth (%)
1	Dividend Per Share	335.62	358.31	356.55	347.40	437.47	367.07	6.85
2	Leverage Ratio (%)	0.45	0.44	0.44	0.45	0.45	0.27	0.48
3	Gross Profit Margin (%)	0.30	0.30	0.25	0.25	0.24	0.11	-4.66
4	Closing Price	6,556.90	7,960.95	9,879.29	12,314.67	13,572.52	10,050.87	19.95
5	Price Book Ratio	1.88	2.01	2.78	2.67	2.67	2.40	9.13
6	Dividend Payout Ratio (Rp)	30.99	35.03	36.51	35.33	31.70	33.71	0.56
7	Dividend Yield (%)	4.11	3.53	3.29	2.32	2.96	3.24	-7.92
8	Current Ratio (%)	3.13	2.84	2.45	2.72	2.47	2.72	-5.69
9	Operating Profit Margin (%)	0.12	0.13	0.11	0.10	0.07	0.11	-3.91
10	Total Assets Turnover (%)	1.25	1.31	1.38	1.28	9.17	9.68	1.94
11	Net Profit Margin (%)	0.15	0.20	0.07	0.06	8.63	8.34	-18.46
12	Inventory Turnover (%)	11.14	6.78	7.29	7.88	1.35	1.31	-6.18

Source: Indonesian Capital Market Directory (2008)

Table 1 has shown that financial performance of go public manufacturing companies listed in ISE for period 2003-2007 has delivered dividend per each sheet of circulated stock about Rp. 367.07 per stock sheet at annual growth rate of 6.85%. Investors' attention is only centralized upon earning information but disregarding the procedure needed to produce this earning information. Therefore, manager is tempted to do a specific thing on earning (earning management) or to manipulate earning (earning manipulation). A hypothesis proposed to explain earning management is *earning-smoothing hypothesis* or *income-smoothing hypothesis*, which states that earning is manipulated to reduce the fluctuation until the company is considered as normal. Issues of *earning management* have long been discussed in accounting literatures. Result of empirical research by Ashari et al (1994) has found that companies listed in *Singapore Stock Exchange* are commonly practicing earning management. Ashari et al (1994) also discover four factors influencing earning management, which are company size, profitability, industry type, and ownership nationality.

A research by *Securities and Exchange Commission* (September, 1999) indicates that trying hard to safe their existence from liquidation (or remaining in financial distress), companies always do *earning management*. Big companies such as *CEC Industries Corp, Intex Corp, Mercury Finance Co, Model Imperial Corp, Photran Corp, WIZ Technology Inc, GE Corp, Miniscribe Corp* and others are quite familiar with such method. This fact is supported by Levitt (1998) who reports that not least 1,600 companies in America have indeed done *creative accounting* every year through *financial numbers game* by using some instruments such as "*revenue recognition, big bath change, materiality and errors, cookie jar reserves,* and *creative acquisition accounting*". The peak, involving scandals in failed companies such as **Enron**, **Worldcom**, **Xerox** and **Merck**, is

representing a conflict of interest in company between manager, stockholder, creditor, government, employee, supplier, consumer and community. In other words, it is conflict of interest between agent and principal. Fraudulent mechanism is often carried out by manager (*agent*) as the party who is authorized to set financial statement because they are the direct managing person of company asset.

Manager attitude is influenced by their position to maintain company's working capital composition and also by the presence of restrictions in the credit agreement between company and creditor. These restrictions are working capital limit, liquidity rate or solvability ratio. The goal of these restrictions is to ensure the presence of an *acceptable* asset management and also to ascertain that manager is working professionally. Financial statement which is made through *earning management* is actually aimed to build up trustable perception among the interest parties in company, or to avoid the perception of financial distress. Result of preliminary survey indicates that go public manufacturing companies listed in ISE cannot escape from this reality. In company with financial distress, manager is working hard to keep its *debt to equity ratio* be healthy and ideal and to produce appropriate working capital composition. Business disturbance absence (or going concern status) may be possible seen from accounting information. In this favorable situation, manager sets financial statement through selecting accounting method, regulating transaction timing, and classifying accounting system into that is increasing reported earning, reducing reported earning, and distributing reported earning (*earning management*).

Company earning at certain period is a main viewpoint attended by the users of financial statement because earning in financial statement is a parameter used to measure the performance of manager at certain period. Net earning information is highly attended by the interested party to estimate performance and accountability of manager in managing company, and also to predict future prospect. It is not surprising if the users often watch over earning rate reported in financial statement (Beaver et al, 1986; Dascher and Malcom, 1970). Financial management is a field where a research to examine the relationship between stock *return* and profit is conducted. Earning rate is considered as dependent variable which is regressed against stock *return* as independent variable. Some methods are useful to calculate stock *return*, but this research considers a method, which is *Earning Response Coefficient* (ERC), to measure earning. Beaver et al (1986) have shown that stock price contains important information provided by earning. Ayres (1994) and Baiman (1982) use ERC as an alternative tool to measure value relevance of earning information. Low ERC means that earning is less informative to investor to make economic decision.

Earning and its quality are measured by comparing earnings between companies and understanding earning quality. Earning quality does not have absolute measure but qualitative and quantitative approaches are used to analyze and to explain earning quality. Quantitative approach applies ratio analysis, while qualitative approach is based on opinion (*judgment*) or viewpoint which is underlined by logic, experience and insight. Earning quality is not related with high or low reported earning. Siegel (1990) quoted by Adhariani (2004) asserts that understatement and overstatement of earning (net earning), stability of components in income report, realization of asset risk, and capital maintenance, are the predictors of future earning (*Predictive Value*).This current research is a follow up from a research by Ashari et al (1994) in *Singapore Stock Exchange.* The author of this research attempts to see generalities possibly made from the findings of Ashari et al (1994) by examining companies listed in Indonesia Stock Exchange. The aim is to ensure whether geographic difference may determine factors influencing earning management practice and earning response coefficient. Background aspects of why this research is important for knowledge development are as follows:

(a) Research of earning management and earning response coefficient with go public manufacturing companies listed in ISE as research population is still few in Indonesia context. Therefore, this research will produce a model of *earning management* and *earning response coefficient* equations for go public manufacturing companies listed in ISE;

(b) The estimation that *earning management* and *earning response coefficient* are influenced by variables such as profitability, leverage, working capital composition, giving bonus to manager, and corporate ownership by manager, is expected to provide more complete generalizations.

(c) The instruments of financial statement preparation such as accounting method selection (*artificial*), accounting system classification, and transaction (*real*) are rarely used in Indonesia context. All these instruments are called as *creative accounting practices*;

(d) This research attempts to ensure whether there is a conflict of interest between *agent* and *principal* among go public manufacturing companies listed in ISE if it is reviewed under agency theory.

Main problems are determined as follows: (1) how much is the influence of profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager, simultaneously or partially, on *earning management* and *earning response coefficient*?; and (2) Which one among profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager is with dominant influence on *earning management* and *earning response coefficient*?   This current research insists on seeking the clarity of the phenomenon related to *earning management* and *earning response coefficient*, and the factors influencing both and its application in financial statement preparation at manufacturing companies listed in ISE. Factors influencing *income smoothing* are usually related to the assessment of stock performance and the interest to obtain dividend stability.The objectives of research are (1) to obtain empirical evidence and to find clarity about the phenomenon of the influence of profitability, leverage, company scale, giving bonus to manager, company's working capital composition, and corporate ownership by manager, either simultaneously or partially on *earning management* and *earning response coefficient*; and (2) to understand which one among profitability, leverage, company scale, giving bonus to manager, company's working capital composition, and corporate ownership by manager, with the most dominant influence on *earning management* and *earning response coefficient* at manufacturing companies listed in ISE.

II.   METHOD

Research is aimed to obtain empirical evidence, to examine and to explain some factors influencing *earning management* and *earning response coefficient* and their application in financial statement in go public manufacturing companies listed in ISE. Type of research is quantitative study at explanative level which explains the causal relationship of the variables observed. *Principal Component Analysis* (PCA) is designed to reduce (to eliminate) number of variables into the manageable variables but with overlapped measurement characteristics. The use of *principal component analysis* will simplify structure and dimension and facilitate the interpretation of all information. *Principal component analysis* is also explaining the structure of variance through a linear combination of variables but the main concept is still reducing and interpreting the data.

Data that will be reduced through PCA are (1) profitability consisting of $PROFIT_1$, $PROFIT_2$, $PROFIT_3$ and $PROFIT_4$; (2) leverage comprising to $LEVER_1$, $LEVER_2$, $LEVER_3$ and $LEVER_4$; (3) Company scale including $SKALAP_1$, $SKALAP_2$, $SKALAP_3$, and $SKALAP_4$; and (4) Company's working capital composition involving $KOMOKER_1$, $KOMOKER_2$, $KOMOKER_3$, and $KOMOKER_4$. Result of these reduced data is principal components of PC_{PROFIT}, PC_{LEVER}, and $PC_{KOMOKER}$.

Data analysis method is made based on the goal and hypothesis of research because response variables are categorical and dichotomous. Response variable of *earning management* is analyzed with **multiple logistic regression analysis**, while that of response variable of *earning response coefficient* is analyzed with **multiple regression analysis**.

III. RESULT AND DISCUSSION

3.1. Result

Research population is 173 companies but only 20 manufacturing companies which meet the model proposed by Guidry et al (1999) and satisfy the criteria of sampling. Analysis is conducted over the sample. These 20 manufacturing companies are shown in Table 2 as follows:

Table 2
Manufacturing Companies as Sample

No	Name of Companies	Company Code
1	PT. Bakrie Sumatra Plantasion, Tbk	UNSP
2	PT. Tambang Batubara Bukit Asam, TBk	PTBA
3	PT. Timah, Tbk	TINS
4	PT. Indocement Tunggal Prakarsa, Tbk	INTP
5	PT. Alumindo Light Metal Industry, Tbk	ALMI
6	PT. Betonjaya Manunggal, Tbk	BTON
7	PT. Budi Acid Jaya, Tbk	BUDI
8	PT. Astra International, Tbk	ASII
9	PT. Astra Otopart, Tbk	AUTO

10	PT. Sepatu Bata, Tbk	BATA
11	PT. Indofood Sukses Makmur, Tbk	INDF
12	PT. Mayora Indah, Tbk	MYOR
13	PT. Siantar Top, Tbk	STTP
14	PT. Ultra Jaya Milk Industry, Tbk	ULTJ
15	PT. Bentoel International Investama, Tbk	RMBA
16	PT. Gudang Garam, Tbk	GGRM
17	PT. HM Sampoerna, Tbk	HMSP
18	PT. Indofarma, Tbk	INAF
19	PT. Kalbe Farma, Tbk	KLBF
20	PT. Unilever Indonesia, Tbk	UNVR

Source: BEI Data, 2012, processed.

Company earning or *Earning Per Share* (EPS) is used as the prerequisite of sampling and also as a part of *Unexpected Earning* (UE). Indeed, *Unexpected Earning* (UE) is used to calculate *Earning Response Coefficient* (ERC) in the slope of regression equation.*Earning Response Coefficient* (ERC) is counted from slope α_1 of the relationship between CAR and UE. Each company will have a number ERC (*time series / firm specific* method). Result of *Earning Response Coefficient* (ERC) calculation using SPSS is described in Table 3 as follows:

Table 3
Descriptive Statistic of Variables of Earning Response Coefficient (ERC)

No	COMPANY CODE	α_1	No	COMPANY CODE	α_1
1	UNSP	-0.2821	11	INDF	1.2630
2	PTBA	0.4095	12	MYOR	-0.5411
3	TINS	0.0266	13	STTP	-0.0452
4	INTP	1.4659	14	ULTJ	-0.3780
5	BUDI	0.2299	15	GGRM	0.4565
6	ALMI	0.4068	16	HMSP	-1.6474
7	BTON	0.2353	17	RMBA	2.0343
8	ASII	-0.3380	18	INAF	2.7040
9	AUTO	-0.7789	19	KLBF	2.9829
10	BATA	0.0335	20	UNVR	1.3585

Source: Secondary Data, Processed in 2012

The influence of variables such as profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager, on *earning management* is made to certain by logistic regression model.Before testing the hypothesis, the presence of categorical variable, which is giving bonus to manager, must be attended. To understand whether giving bonus to manager is influencing *earning management*, *crosstab* analysis is conducted to giving bonus to manager against *earning management*. Result of *crosstab* analysis of giving bonus to manager against *earning management* is shown in Table 4.

Table 4
Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	23.019[a]	1	.000		
Continuity Correction[b]	21.700	1	.000		
Likelihood Ratio	23.289	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	22.914	1	.000		
N of Valid Cases	100				

[a] 0 cells (.0%) have expected count less than 5. The minimum expected count is 37.80.
[b] Computed only for a 2x2 table

Result of *crosstab* analysis in Table 4 indicates that there is no expected value below 0.05, and therefore, significance rate of *Chi Square* is used. Significance rate of *Pearson Chi Square* is 0.000 that is blow 0.05, and thus it is concluded that giving bonus to manager is related to *earning management*, or that giving bonus to manager is significantly influencing *earning management*.

Table 5
Model Summary

Step	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
1	253.034[a]	.574	.785

[a] Estimation is terminated at iteration number 4 because parameter estimates have changed by less than .001.

The result of SPSS in Table 5 shows that the simultaneous influence rate of profitability, leverage, company scale, giving bonus to manager, company's working capital composition, and corporate ownership by manager on *earning management* is determined by **Nagelkerke R Square** rate which is an analogy to **R-square of Multiple Regression**. Based on the calculation in model, *Nagelkerke R Square* rate is 0.785 meaning that six variables, which are profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager, are positively and significantly influencing *earning management*, and able to explain *earning management* variance for 78.5 % while the remaining 21.5 % are explained by other factor beyond this research.

Table 6
Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Profit	7.614	2.408	10.003	1	.002	.791
	Lever	.531	.129	17.234	1	.000	1.542
	Komoker	4.228	1.771	10.453	1	.002	4.220
	Bonus (1)	.281	.084	4.492	1	.031	1.197
	Skalap	2.276	.973	5.288	1	.021	1.105
	Kpemanj	.049	.316	8.025	1	.004	1.051
	Constant	1.490	1.014	2.159	1	.142	.225

[a] Variable(s) entered on step 1: Profit, Lever, Komoker, Bonus, Skalap, Kpemanj

Result of calculation of SPSS output in Table 6 above has produced the estimation of Multiple Logistic Equation as follows:

EM = 1.490 + 7.614Profit + 0.531Lever + 4.228Komoker + 0.281Bonus + 2.276Skalap + 0.049Kpemanj

Earning management equation is a multiple logistic regression (logit) using population data to be applied against research object based on predetermined requirement. Therefore, significance test is needed because *slope coefficient* β_i is an actual slope.

Partial probability rate of the influence of profitability, leverage, company scale, giving bonus to manager, company's working capital composition, and corporate ownership by manager on *earning management* is understood using the following model formula:

Probability = 1 / {1 + exponential [-(β_0 + $\beta_i X_i$)]}

Result of the calculation of logit probability (logit P) is displayed in the following table:

Table 7
Logistic Probability of *Earning management* Factors

The Influence of Independent Variables on Dependent Variable	Logit Regression Coefficient (β1)	Exponential (βi)	Logit Probability (P)
Profit on EM	7.614	0.791	0.616
Lever on EM	0.531	1.542	0.709
Komoker on EM	4.228	4.220	0.107
Bonus on EM	0.281	1.197	0.259
Skalap on EM	2.276	1.105	0.350
Kpemanj on EM	0.049	1.051	0.461

Source: Secondary data are processed.

Result of calculation of probability table (Table 7) above is elucidated as follows:
Higher profitability experienced by manufacturing companies in Indonesia is positively influencing *earning management* at probability rate of 61.6%. Higher leverage possessed by manufacturing companies in Indonesia is positively influencing *earning management* at probability rate of 70.9%. Manufacturing companies in Indonesia with higher company scale are positively influencing *earning management* at probability rate of 35 %. Manufacturing companies in Indonesia with greater bonus given to manager based on earning obtained are positively influencing *earning management* at probability rate of 25.9 %. Greater working capital composition owned by manufacturing companies in Indonesia is positively influencing *earning management* at probability rate of 10.7 %. If corporate ownership by manager in manufacturing companies in Indonesia is great, it is positively influencing *earning management* at probability rate of 46.1 %. Result of partial test has indicated that a variable with dominant influence on *earning management* is leverage. The probability rate of leverage is 70.9 % greater than that of other variables.

Considering the analysis over the variables influencing *earning management*, it can be said that: (1) Greater *profit margin to sales ratio*, greater *net income to total assets ratio*, and greater *return on equity* in manufacturing companies are positively and significantly influencing *earning management* because they often increases reported earning; (2) Greater *total debt to total assets ratio*, greater *total debt to total equity ratio*, and greater *long-term debt to total equity ratio* in manufacturing companies are positively influencing *earning management* because they tend to increase reported earning; (3) Greater total assets and sale rate in manufacturing companies are positively influencing *earning management*; (4) Greater bonus given by company to manager is positively influencing *earning management* because companies tend to increase reported earning; (5) Greater *net working capital to total liabilities ratio* and greater *net income to total liabilities ratio* in manufacturing companies are positively and significantly influencing *earning management* because companies tend to increase reported earning; and finally, (6) Greater corporate ownership by manager in manufacturing companies is positively and significantly influencing *earning management*.Based on the coefficient rate obtained from result of hypothesis testing, it is acknowledged that manufacturing companies which use *earning management* in preparing their financial statement is giving their priority higher onto giving bonus to manager as proved by coefficient rate of 0.281. In the hypothesis test, linear regression model is used to ensure the influence of variables of profitability, leverage, company scale, giving bonus to manager, company's working capital composition, and corporate ownership by manager on *earning response coefficient*. Variable of giving bonus to manager is considered as *dummy* variable because this variable is ordinal scaled. Result of SPSS output is shown in the following Table 8:

Table 8
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.928[a]	.861	.857	.3455597

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[a] Predictors: (Constant), Corporate Ownership by Manager, Giving Bonus to Manager, Profitability, Leverage, Company Scale, Working Capital Composition

Table 9
ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	157.743	6	26.290	220.167	.000a
	Residual	25.435	93	.119		
	Total	183.177	99			

[a] Predictors: (Constant), Corporate Ownership by Manager, Giving Bonus to Manager, Profitability, Leverage, Company Scale, Working Capital Composition

[b] Dependent Variable: Earning Response Coefficient

Result of SPSS calculation shows that the influence rate of variables of profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager, in simultaneous manner, on *earning response coefficient* is seemingly determined by **R-square** rate, which, based on model, is 0.861. Its significance rate is 0.000 smaller than 0.05, meaning that six variables, which are profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager, are positively and significantly influencing *earning response coefficient*. Simultaneous influence rate is 86.1 %, while the remaining 13.9% *earning response coefficient* is influenced by other variable beyond this research. Result of hypothesis testing about the influence of variables of profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager, in partial manner, on *earning response coefficient* is shown in Table 10 as follows:

Table 10
Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.144	.129		1.115	.266
	Profitability	.049	.026	.050	1.885	.041
	Leverage	.146	.027	.166	5.342	.000
	Working Capital Composition	.274	.029	.317	9.377	.000
	Giving Bonus To Manager	.120	.047	.066	2.550	.011
	Company Scale	.319	.026	.393	12.047	.000
	Corp. Ownership By Manager	.276	.028	.331	9.741	.000

[a] Dependent Variable: Earning Response Coefficient

Result of SPSS output is indicating that partially, variables of profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager are positively and significantly influencing *earning response coefficient*. Significance rate of each independent variable is lower than of 0.05. Linear regression model is then given as follows:

ERC =   **0.144 + 0.049Profit + 0.146Lever + 0.274Komoker + 0.120Bonus + 0.319Skalap + 0.276Kpemanj**

In testing the hypothesis about one among variables of profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager, with dominant influence on *earning response coefficient*, then the standardized beta coefficient rate of each independent variable are compared. The biggest is an independent variable with dominant influence on *earning response coefficient*. It seems that company scale has the biggest standardized beta coefficient rate, which is 0.393 if compared to other independent variables. Therefore, partially, company scale is dominantly influencing *earning response coefficient*.

III.   DISCUSSION

Logistic regression analysis is used because of its compatibility to measurement scale between variables. Measurement scale of *earning management* variables is nominally scaled and dichotomous. Linear regression analysis is used because *earning response coefficient* variables are ratio scaled. After hypothesis testing, it is known that all independent variables are positively and significantly influencing *earning management* and *earning response coefficient*. Manufacturing companies in Indonesia are usually possessing greater *return on assets* or greater *net income to total assets ratio*, which are both positively influencing *earning management* and *earning response coefficient*. Its probability rate has made creditor, financial analyst and owner (stockholder) to no trust easily financial data reported by company manager in their effort to asses *return on equity* (ROE). It is because ROE of manufacturing companies in Indonesia has been the object of *earning management* and *earning response coefficient* in order to show greater company ability to obtain net earning from all assets managed by company. ROE is a description of the ability of capital invested into all assets to produce company gain.

When *earning management* is considered, manager expects to control over the change of *activity ratio* as economic rentability and its influence on *rate of return*. Financial analyst and creditor are using *Du Pont System* analysis to determine company ROE because they suspect that ratio of finance or *net income to total assets ratio*, may be greater than what it shall be because manager maximizes this ratio than what must be the right of capital owner. Probability rates have shown that there is positive relationship between *earning management* to control over capital rentability as the ratio of after-tax net earning to equity of stockholder, and the measurement of return on investment of common stockholder. Logistic regression model indicates that the ability of company to produce earning compared to its sale may be relative and absolute. Based on the assumption of **agency theory** and its application within Indonesia context, stockholder must understand that financial manager and company leader really do *earning management* to maximize their profitability. It is supported by the finding that the interest of agent is more dominant than that of principal. It may be so because of the owner's lower understanding about and access to the preparation of financial statement in order to ensure that they can have their expected profitability report.

Greater *return on equity* and greater *net income to common equity ratio* in manufacturing companies positively influence *earning management* and *earning response coefficient*. This information must be useful for stockholder and financial analyst in assessing the possibility if company can experience *financial distress* which may disturb company operation. Financial distress is a condition that must be highly attended. This condition represents the incapacity of company to obtain earning and to meet the duty (*insolvency*). A form of financial distress is *stock based insolvency* which is signed by the presence of *negative common equity* in company balance. Other form is *flow based insolvency* shown by the incapacity of cash flow to stay current in company because *earning management* is conducted by the agent targeted toward greater *net income to common equity ratio*. Measuring and assessing profitability of manufacturing companies must be cautious because it is indicated that manager often does *earning management* to show that company can reduce their debt as if company has adequate internal fund to pay company investment. In reality, very few companies have such self-supported finance but if the money is used to bring the company into safety, the implication is not surely bad.Greater *total debt to total assets ratio* in manufacturing companies is positively influencing *earning management* and *earning response coefficient*.

Probability rate may be useful for the creditor in assessing the submitted collateral to understand the ability of company to pay the debt if the company shall be liquidated. Higher level of this ratio means higher dependence of company on capital funding from external party. Greater *total debt to total assets ratio* may have implication to the description about the ability of company to use the asset to meet all duties. A motivation of company to do *earning management* is to avoid the occurrence of *stock based insolvency* (technical liquidation). It begins with temporary liquidity distress but it continues with a possibility that company has book rate of debt exceeding the assets in possession such that equity is negative or that company is liquidated based on equity.

Greater *total debt to total equity ratio* in companies is positively influencing *earning management* and *earning response coefficient*. Indeed, *total debt to total equity ratio* is useful for the fund supplier or the creditor to connect company financial ratio to future prediction of economic. A motivation of manager to do *earning management* against *total debt to total equity ratio* is to achieve a compatible comparative rate between all debts and owner capital to avoid operational difficulty and to reduce duty stress at deadline. Otherwise, cash reserve may be depleted, especially when receivable is hardly collected. If it is anticipated badly, companies with duty at expiration rate will experience debt difficulty (*loan default*). The difficulty to pay long-term debt may drain the assets in possession. Such financial distress can lead to company failure (*failure of firm*). All these reasons are used by manager to do *earning management* against *long-term debt to total assets ratio*. In reality, manager cannot avoid this situation but in perception, it can be avoided in the future if manager has good finance by *hedging* all debts, preparing market plan, and ensuring good production for the behalf of company survival. Greater *long-term debt to total equity ratio* in companies is positively influencing *earning management* and *earning response coefficient*. It means that companies try to avoid their long-term financial distress or their insolvency. It indicates the inability of debtor to pay debt, if compared to their *total equity*, such that negative biased liquidity occurs which leads to company failure. Debtor's belief that creditor persistently emphasizes onto *long-term debt to total equity ratio* may encourage manager to do *earning management* to avoid company failure. It is consistent to *debt to equity ratio* hypothesis suggested by Watts and Zimmerman (1978). Higher debt proportion used by company only forces stockholder to bear bigger cost. Because company shall pay fixed interest cost for their long-term debt, it only increases the risk assumed by stockholder.

Greater *total assets* owned by companies can positively influence *earning management* and *earning response coefficient*. Its probability rate is interpreted as that company owner and creditor must compare the total assets and the ability of company to produce earning (rentability). Positive influence may indicate the desire of manager to maintain company rentability rate. Total assets can be defined as capital goods stated in the debit part of balance which are productive to generate income. Companies with more assets have greater risk but also have more opportunities to obtain greater earning. Greater *sale rate* by companies is positively influencing *earning management* and *earning response coefficient*. Based on *size hypothesis*, it is assumed that big scale companies tend to postpone or to shift the earning from current period to future period. Reverse action is apparent for small scale companies. Its probability rate shows that activity rate of companies is described from their sale activity. Manager is interested to do something with sale rate because it is related more closely to tax burden than all assets invested in the company. This manipulation may produce earning as the result after reducing principal price and company periodic burden.

The probability rate of the influence above can also be interpreted based on "*political cost*" where big companies must pay greater political cost (to minimize *earning*) to avoid the increment of employee payroll, tax allocation and public claim. In small companies, however, manager attempts to increase earning to obtain fund from creditor. Companies at bigger scale will reduce their reported earning in pursuance of statement which supports *company equity transfer hypothesis*. Current research is not so different from foreign research. The only difference is that company scale in Indonesia may not quite similar to that in United States. Giving bonus to manager based on the obtained earning is positively influencing *earning management*. This probability is meaningful to company owner because it implies to *manager compensation plan* or *bonus plan hypotheses*. The implication may be explained as follows: (a) giving bonus to manager is related to manager interest and influential to company manager; (b) financial statement which presents the information about company performance is a base of giving bonus to manager; and (c) giving bonus to manager may reduce conflict between investor and manager.

In wider sense, a contract of giving bonus to manager is quite influential to the interest of *agent* to maximize the reported earning as long as this is not defying the generally acceptable accounting principles. It is called as *creative accounting practices*. If companies shall loss during the current year, manager will reduce earning report as low as possible by assuming that reported earning is increasing in the future (above net earning allocated for giving bonus) and therefore, obtain bonus contract in that year. Consequently, *principal* is always cautious to the bonus contract given to *agent* because its rate is determined by the obtained earning. *Principal* shall use other format in giving compensation to manager, such as based on the price of company stock in capital market.

Greater *net working capital to total liabilities ratio* in companies is positively influencing *earning management* and *earning response coefficient*. Probability rate of this influence is reflecting "*a statement of sources and usage of fund*". It is needed to produce an acceptable management of working capital to keep up *going concern status* of company. Greater *net working capital to total liabilities ratio* means that companies do have greater ability to pay the duty or seem more liquid. Each company always concerns with retaining their ratio to prevent their liquidity from being threatened.

Financial analyst must be careful in giving their recommendation because greater *net working capital* is perceived as lower *risk*, or lower *net working capital* is related to higher *probability* that company is illiquid. In reality, financial statement is influenced by many factors. Therefore, owner (*principal*) and financial analyst must be smart enough to use this ratio because *net working capital to total liabilities ratio*, based on company financial data, is often subjected to *earning management* by agent.Greater *net income to total liabilities ratio* in companies is positively influencing *earning management* and *earning response coefficient*. The effectiveness of working capital usage is a part of management of current assets supported by long-term fund. If, based on income and risk, company fails to produce earning, it is then company called as **technically insolvent** (unable to pay debt). Company earning is increased in two ways, which are by increasing income and by reducing burden. Burden is reduced by increasing the efficiency of expense posts, and earning is increased by investing into *profitable* assets which can produce great income. The users of financial statement shall remember that company's working capital can be met through *financing mix*, such as: (a) *Aggressive approach*, in which the demand of short-term fund is financed by short-term fund source, while the demand of long-term fund is seemingly financed by long-term fund source; (b) *Conservative approach*, in which all demands for fund are financed by *long-term funds* and *short-term funds* but only usable in emergency condition; and (c) *Tradeoff* between both approaches is that companies may use their expense plan between high profit high risk (*aggressive approach*) and low profit low risk (*conservative approach*) such that the obtained earning is quite reliable (moderate) with not too high risk.

Greater corporate ownership by manager in manufacturing companies is positively influencing *earning management* and *earning response coefficient*. In this model, higher percentage of corporate ownership by manager means higher *earning management* aspect. Manager always avoids the possibilities of take-over or replacement of company management. Logistic probability may be useful for the capital owners when agent also works as the owner (principal) of company. It is suspected that stock ownership by company leader is related to company achievement. The proportion of stock ownership controlled by manager can influence company policy. By this ownership, the interests of manager and stockholder may stay equal. Manager benefits directly from good decision, but also losses due to poor decision. This method is called as *balancing model of agency cost*

Considering all models so far, auditors are suggested to be careful in examining financial statement of manufacturing companies **(although the accountability of financial statement fit remains in the hand of manager)**. It is evident because managers always use the slack in accounting principle as long as it keeps consistent to Financial Accounting Standard in order to maximize their interest by increasing earning report under several reasons explained previously. This method is called as "***creative accounting practices***" conducted with **financial numbers game**". Financial analyst, creditor, and principal are suggested that before making decision or giving opinion and recommendation, they shall use presumption principle that financial statement prepared by management is respecting *reliability of financial information* and therefore, it is tested to ensure whether there is *earning management* or not.

All results of hypothesis testing of variables of profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager, are indicating that there obvious influence from profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager on *Earning Response Coefficient* (ERC). These results also can be described as that higher company earning, greater company debt, greater company size, greater bonus given to manager based on earning or not, greater working capital composition, and greater proportion of corporate ownership by manager, are positively and significantly influencing *earning response coefficient*. In other words, it is assumed that variables of profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager are significantly influential in explaining *Earning Response Coefficient* (ERC). Results also proves that variables of profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager provide additional explanatory strength upon the difference of *earning response coefficient*.

These results are consistent to Etty (2008) who reports that there is obvious influence of *Size* on *Earning Response Coefficient* (ERC). According to Etty (2008), the abundance of information available every year in big companies is less reacted by market during earning announcement. The differences of control variable placement, company that is observed, and obvious rate/level or trust level, may be the reason behind different result between current research and Etty (2008).Theoretically, profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager can influence earning reported by company which is then responded by the users of financial statement made by manager or management. The wider information about company can produce better consensus about economic earning. More information available about company activities will help market to interpret the information in the financial statement.

IV. CONCLUSION

1. Profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager are determinants or consideration bases used by management (agent) to do *earning management*. Companies (agent) that do *earning management* can also increase their *earning response coefficient*, which may also increase their positive response strength of investor.

2. Profitability, leverage, company scale, giving bonus to manager, company's working capital composition and corporate ownership by manager can influence earning reported by company which is then responded by the users of financial statement made by manager and management. The users of financial statement are indeed quite concerned with the scope of information about company because it can produce better consensus about economic earning. More information available about company activities acknowledged by the users of financial statement will facilitate the market, especially investor, to interpret the information in the financial statement.

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