

Earning Management and Value Relevance Before and After the Adoption of IFRS in Manufacturing Company in Indonesia

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ABSTRACT

This research aims to test the quality of accounting information before and after the adoption of IFRS (International Financial Reporting Standards) on Financial Accounting Standards in Indonesia. This research discusses the value relevance of earnings as one dimension of the quality of accounting information. The adoption of new standards is expected to increase the quality of accounting information regarding the environmental factor in Indonesia. The companies listed on the Indonesian Stock Exchange in 2010-2013 were used as the samples of this study. This study used paired samples t test and Chow test. This research has obvious implications for the regulation in Indonesia: the government is expected to adjust the tax rules related to final tax of assets revaluation with IFRS-based GAAP.

Keyword: earnings management, value relevance, IFRS Adoption, quality of financial reporting

I. INTRODUCTION

Indonesia adopts IFRS in 2012. The adoption of IFRS is one of Indonesia's efforts to open international capital market opportunities. The application of IFRS in the Indonesia's Financing Accounting Standard will provide understanding of financial statements due to accounting standards that are enforced internationally. Indonesia is also one of the members of the G20 that agreed to do the convergence to IFRS.

The application of IFRS as an accounting report standard is expected to improve the quality of accounting information in Indonesia. The use of a balance sheet approach and fair value in IFRS are expected to reduce earnings management practices. Jones (1991) input gross property, plant, and equipment (PPE) and income changes into the model to control nondiscretionary accruals changes caused by changes in the condition of economic development. If the amount of the gross PPE increased, the amount of nondiscretionary accruals also increased.

The relevance of the value measured with the model price. Variables in pricing model is the share price (dependent), earnings per share, and book value per share (independent). The relevance of the values reflected in the stock price. The relevant accounting information is information that is capable of influencing the decisions of investors. When investors use the available accounting information as a basis for making a decision, it means that the investors believe in the truth of such information. If

there is good information, e.g. profit per share and book value per share increased, then the share price will rise too.

Previous studies showed inconsistent results regarding the increased relevance of accounting information's value after the adoption of IFRS. Barth et al. (2007) did a research on companies in the US and showed that US companies had higher quality of accounting information than those companies adopting IAS. Companies with US GAAP have higher accounting information quality than the IAS companies. The IAS companies perform higher earnings management, lower value relevance, and lower time loss recognition than US GAAP companies. This is contrary to the empirical evidence from Ismail et al. (1995). The quality of the company's profit in Malaysia increased after the adoption of IFRS. Earnings reported after the adoption of the IFRS showed that the management of its profits was lower and higher value relevance both profit value relevance and equity's book value relevance. While Elbannan (2010) showed that the implementation of IFRS is not able to lower the earnings management.

This research compared the quality of accounting information after and before the adoption of IFRS. The differentiation of this research with the research conducted by Kargin (2013), Cahyonowati and Ratmono (2012), is that this research adds earnings management proxy. Earnings management was chosen due to the change from standard based to principle based. Professional judgment is widely used in principle based which can degrade the quality of accounting information. While the differences of this research with the research done by Ismail (2013) are in the use of samples and models to gauge the relevance of value. This research using a sample of manufacturing companies listed in IDX. Manufacturing company was chosen because this type of industry tend to have almost the same accrual characteristics (Halim et al., 2005) and has the largest company listed in the IDX. The model used to measure relevance in this research is the price model. Price model used in this research because this model has less influence from inefficient capital market condition than the return model.

This study adds value relevance variables to measure the improvement of the quality of accounting information. The value relevance is selected due to a change from the standard based to principle based which can increase the relevance of accounting information value.

This research aims to examine the difference in the quality of the accounting information pre and post adoption of IFRS in Indonesia to strengthen previous empirical evidence. This research compared earnings management after and before the adoption of the IFRS and the relevance of the after and before the adoption of the IFRS as accounting information quality proxy.

II. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Earnings management practices can make investors take mistake in making an investment decisions and lead to a trust crisis. Company managers have a certain motivations in manipulating company's financial data. Wild et al., (2005:121) found some motivations in earnings management, namely incentive agreement, the impact of stock prices, and other incentives.

One of the models that can be used to measure the earnings management is modified Jones model. This model measures the earnings management with discretionary accruals. Total discretionary accruals is divided into two that are discretionary accruals and non-discretionary accruals. This change is a result of

management discretion and could be called earnings management form. This is modified Jones model (Dechow et al., 1995):

$$\frac{TAC_{it}}{A_{t-1}} = \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \alpha_2 \left\{ \frac{(\Delta REV_{it} - \Delta REC_{it})}{A_{t-1}} \right\} + \alpha_3 \left(\frac{PPE_{it}}{A_{t-1}} \right) + e$$

Jones (1991) input gross property, plant and equipment (PPE) and income changes into the model to control nondiscretionary accruals changing that are caused by changes in the condition of economic. Revenues changing affect accrued changes that comes from working capital such as accounts receivable, inventory, and liability.

Francis and Schipper (1999) defined the relevance of accounting information value as the ability of accounting figures to summarize the underlying stock price information, so the relevance of the value indicated by a statistical relationship between financial information and stock price or return.

Relevant earnings per share are earning per share which is able to influence the decisions taken by the information user. Relevant earnings per share used by information user as the basis for decision making. The value relevance of earnings per share reflected in stock prices. Management of profit and other dysfunctional behavior arising due to the asymmetry of information and conflict of interest between agent and principal cause earnings per share does not describe the actual performance of the company and mislead the users of the information. This causes the value relevance goes down with increasing trust crisis between the agent and the principal.

Book value per share is the amount of each stock that will be accepted if the company is liquidated on the basis of the amount reported in the balance sheet. Book value per share is used to evaluate a company's net assets. This information is not directly presented in the financial statements. Book value per share is calculated by dividing the equity holder of common stock with outstanding common stock (Kieso, et al., 2008:379).

The relevance of book value per share is the ability of the data of book value per share in influencing information users' decisions. Book value per share will lose its relevance if the assessment of balance sheet cannot estimated assets' fair value. In addition, the book value per share will lose its relevance if the information in the financial statements is manipulated by certain parties in order to make the company looks in a good condition. The relevance of the book value per share is reflected in the stock price.

One of the models that can be used to measure the value relevance is the model price. Here is a price model (Ohlson, 1995):

$$P_{it+1} = a_0 + b_1 NI_{it} + b_2 BV_{it} + e$$

The relevant accounting information is information that is capable of influencing the decisions of investors. When investors use the available accounting information as a basis for making a decision, it means that investors believe in the truth of such information. If there is good information, such as profit per share and book value per share increased, then the share price will rise. Whereas if there is bad news that earnings per share and book value per share is down, then the share price will come down as well.

2.1. Earnings Management before and after the adoption of IFRS

Schipper (1989) described the earnings management as a deliberate intervention in the external reporting process to gain some personal benefit. This can be done through the selection of methods of accounting in GAAP or by implementing the methods that have been determined by certain ways.

The adoption of Financial Accounting Standard Statement (PSAK) towards IFRS causes any change in characteristics of the PSAK itself such as changes of rules-based PSAK to principles-based PSAK. The existence of clear rules and quantitative restrictions on the standard that implements rule based makes it a rule to be more consistent. However, the principle based standards that emphasis more on the professional judgement make a standard more flexible and subjective in doing a judgment. This condition gives the possibility of earnings management practices greater than prior to the adoption of IFRS. It is thought to affect the quality of the company's profit (Bangun, 2012).

On the other hand there are some accounting methods that are restricted in the IFRS as for long-term investments in liability and equity instruments set in IFRS 7 and 9. IFRS does not allow reversal for impairment expense on Available for Sale Debt Securities and Held-to-Maturity-Securities. In the fixed assets subject to IAS 16, compensation for loss or decrease in value cannot be offset against the recorded value of lost or dropped assets. In addition, the use of balance sheet approach and fair value makes income smoothing increasingly difficult to do. Some examples above can reduce the accounting fraud practices include earnings management.

The results of the study showed contrary evidence. Research results by Rohaeni and Aryati (2012) and Ismail, *et al.* (1995) showed that the adoption of IFRS can improve the quality of accounting information by the decline in earnings management. Otherwise Zining Li (2014) showed that adoption of IFRS increased earnings management. Therefore, this research formulated the following hypothesis:

H1: there is a difference of earnings management before and after the adoption of the IFRS.

2.2. The value relevance before and after the adoption of IFRS

The information is relevant when the information has benefits in accordance with the act undertaken by the users of financial statements. The implementation of IFRS are expected to enhance the relevance of financial statements because it uses fair value more.

The description above shows that it is still unclear about the improvement of the accounting information quality through a decrease in earnings management of post adoption of IFRS. In addition, the results of previous research showed the contrary evidence. Research conducted by Adibah, *et al.* (1995) showed that the adoption of IFRS increase the value relevance of both the relevance of the equity's book value or profit value. In contrary, the research of Cahyonowati and Ratmono (2012) showed that the adoption of IFRS does not affect the relevance of the book value while the profit's value relevance has increased after the adoption of IFRS. IFRS principles-based standards can improve more the value relevance of accounting information. Fair value measurement can illustrate the position and economic performance of the company. Therefore, the hypothesis of this research is:

H2: there is a difference in value relevance before and after adoption of IFRS

III. RESEARCH METHOD

The population of this research was the entire company listed in Indonesia Stock Exchange (IDX) in 2010-2013. Public company listed on the IDX was chosen because it is the entity with the required accountability using PSAK-IFRS in drafting financial statements. The sample of this research is the manufacturing company listed in IDX regarding the purposive sampling criteria. Manufacturing company was chosen because it tends to have the same accrual characteristics (Halim, et al., 2005) and is the largest number in the IDX. Purposive sampling criteria of this research are:

- a. Manufacturing companies publish annual financial statement data consistently over the years 2010-2013;
- b. Manufacturing companies are neither delisting nor relisting from IDX during the years 2010 to 2013.
- c. Presenting financial statement in rupiahs during the years 2010-2013.
- d. Providing another necessary data such as stock prices, the number of common stock.

The quality of accounting information is reflected into two variables, the value relevance and earnings management. Earnings management measured using discretionary accruals (DA) that is calculated by subtracting total accruals (TA) and nondiscretionary accruals (NDA). Modified Jones Model is used to calculate DA (Dechow et al, 1995). The formula to measure total accruals is:

$$TA_{it} = \text{Net Income} - \text{Cash Flow from Operation} \dots \dots \dots (1)$$

The next step is count the accrual value estimated by OLS regression equations (Ordinary Least Square), as follows:

$$\frac{TA_{it}}{A_{t-1}} = \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \alpha_2 \left\{ \frac{(\Delta REV_{it} - \Delta REC_{it})}{A_{t-1}} \right\} + \alpha_3 \left(\frac{PPE_{it}}{A_{t-1}} \right) + e \dots (2)$$

Description:

- TA_{it} = Total accrual the company i in t (year)
 A_{t-1} = Total asset of company i in the end of the year t-1
 ΔREV_{it} = Changing in company's revenue from year t-1 to t
 PPE_{it} = *Gross Property, plant, equipment* company i in t (year)
 ΔREC_{it} = Net changes of account receivable in company I from year t-1 to t
 e = *Error*

Regression in equation (2) produces the coefficients α_1 , α_2 , α_3 and. Those coefficients are used to predict the nondiscretionary accrual through the following equation:

$$NDA_{it} = \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \alpha_2 \left\{ \frac{(\Delta REV_{it} - \Delta REC_{it})}{A_{t-1}} \right\} + \alpha_3 \left(\frac{PPE_{it}}{A_{t-1}} \right) \dots (3)$$

NDA_{it} = nondiscretionary accrual of company i in t (year)

After that, the discretionary accrual can be calculated by subtracting the total accrual (calculation (1)) and nondiscretionary accrual (calculation (3)).

$$DA_{it} = \left(\frac{TAC_{it}}{TA_{it-1}} \right) - NDAC_{it} \dots\dots(4)$$

DA_{it} = Discretionary accrual of company i in t (year)

Price model used to measure the value relevance in this research is the stock price. Stock price used is here is closed price per March t+1.

$$BV = \frac{\sum \text{Stockholder's equity}}{\sum \text{Outstanding stock}}$$

Earnings per shares (EPS) is the ratio of net income for the holders of common stock by the number of outstanding common stock. Earnings per shares is measured by logarithm to control the normality of the data.

$$EPS = \frac{\text{Net Profit} - \text{Preferent Divident}}{\sum \text{Outstanding Common Stock}}$$

The relevance of value before and after the adoption of the IFRS in the study measured by Price Model developed by Ohlson (1995):

$$P_{it+1} = \alpha_0 + b_1 NI_{it} + b_2 BV_{it} + \text{Size} + e \dots (1)$$

Description:

- P_{it+1} = stock price on 31st March in t+1
- NI_{it} = *earnings per share*
- BV_{it} = book value of equity per stock sheets
- Size = Control variable, company's size is determined by *total asset*.

This study tested using t-test inferential statistic by paired-sample t test and Chow test. This research do hypothesis testing of value relevance variable by chow test. The formula of the Chow Test according to Ghozali (2011:182):

$$f = \frac{(RSSr - RSSur) / k}{(RSSur) / (n1 + n2 - 2k)}$$

Description:

- RSSr = restricted residual sum of squares (2010-2013)
- RSSur = RSS1 (2010-2011) + RSS2 (2012-2013)
- N1 = number of samples in 2010-2011
- N2 = number of samples in 2012-2013
- k = the number of estimated parameters

IV. RESULTS

The selection of the sample based on certain criteria creates 37 companies every year as the samples. The number of samples before (2010-2011) and after the IFRS adoption (2012-2014) as much as 74 companies. This research indicates that the average

discretionary accrual (DA) of manufacturing company is different before and after the adoption of the IFRS i.e. of 0,080 and 0.075. While table 7 shows that the differences were not statistically significant. T value 0,606 is bigger than 0.05 so that **HA was rejected**. Thus, the conclusion is there is no difference in earnings management before and after the adoption of the IFRS. The result of this study is consistent with the research by Elbannan (2010) and Barth et al. (2007) which stated that adoption of IFRS is not able to lower the level of earnings management. These findings contradict the results of the study conducted by Ismail (2013) and Bangun (2012). Ismail claimed that earnings management decline after the adoption of IFRS. While according to Bangun (2012) there is a difference in the quality of earnings before and after the adoption of the IFRS that are described by earnings management.

The implementation of IFRS has potential to create positive and negative impacts. The use of a balance sheet approach and fair value makes income smoothing increasingly difficult to do. On the other hand, the principle based standards that emphasis more on professional judgement, make a standard more flexible and subjective in doing judgment. It gives the possibility of a greater chance to do earnings management practices.

Measurement of fair value can reduce earnings management because company needs to do a revaluation. Revaluation of assets is re-evaluating asset either partially or completely using market value when the revaluation done. Revaluation of assets can reduce earnings management. Earnings management leads to record asset as underestimate or overestimate because profit is recorded too much or less than the real profit. When assets is revaluated, the fair value of asset will be known. Thus, it will be clear whether the company do earnings management or not. There is no difference between earnings management before and after the adoption of IFRS. It could be due to the revaluation of assets in Indonesia carried out every 5 years, so that over a period of 5 years the earnings management are not visible.

Table 8 (in Appendix) serves residual data to calculate Chow Test. The results of chow test: RSS1 = 6,239; N1 = 74; RSS2 = 5,125; N2 = 74; RSS3 = 10,743; k = 4 (the number of estimated parameters); Df = 144 (N1 + N2 - k); F table = 2, 43

$$\begin{aligned} \text{RSSur} &= \text{RSS1} + \text{RSS2} = 11,364 \\ F &= \frac{(\text{RSS3} - \text{RSSur}) / k}{(\text{RSSur}) / \text{df}} \\ F &= \frac{(10,743 - 11,364) / 4}{(11,364) / 144} \\ &= -1,967 \end{aligned}$$

The results show that F-count is smaller than F table. It can be concluded that the relationship between stock price, earnings per share and book value per share is not experiencing structural changes during the period before and after the adoption of the IFRS.

Table 4.2.

Multiple Linear Regression Value Relevance

Variable	Before Adoption		After Adoption	
	P	P	P	P
	Coefficient	Value	Coefficient	Value

Constants	0,538	0,052	0,120	0,537
NI	0,579	0,000	0,591	0,000
BV	0,282	0,033	0,346	0,005
SIZE	0,181	0,017	0,252	0,000
F Value	87,734	0.000	88,359	0,000
Adjusted R ²	0,781		0,782	
Residual	6,239		5,125	

Source: Processed Secondary Data, 2015

According to Barth et al. (2008); If the value of adjusted R2 increases significantly, it can be inferred that increased in value relevance of accounting information caused by the adoption of the IFRS. Chow Test results showed there was no difference significantly in the values relevance before and after the adoption of the IFRS. The conclusion is increased relevance simultaneously of partially unable to give significant effect of differences in the relevance after the adoption of the IFRS so that the **second hypothesis is rejected**.

The results of this research in line with the research results presented by Ismail, et al. (2013) and Kargin (2013) which stated that the adoption of IFRS increase the value relevance. These findings contradict with the results done by Kusumo and Subekti (2014), Cahyonowati and Ratmono (2012). They stated that the adoption of IFRS causing the value relevance decreases. Chow Test results showed there was no significantly difference between values relevance before and after the adoption of the IFRS. It can be drawn a conclusion that the increased of relevance is not simultaneously capable of providing significant difference effect on relevancy after the adoption of the IFRS.

The relevance of value after the adoption did not experience significant differences because the use of fair value in Indonesia is experiencing a variety of constraints as described above. The measurement of fair value can increase value relevance because the information presented was able to describe the condition of economic and the actual performance of the company. Obstacles such as pay taxes more if the market value is greater than the book value of assets and the additional costs incurred for the services of assets appraisers causing a reluctance of companies in doing the revaluation. The value relevance after adoption is not increasing to the maximum and cause no significant difference in before and after the adoption of the IFRS.

V. CONCLUSIONS, IMPLICATIONS, AND LIMITATIONS

This research concludes that there are no significant differences between the earnings management before and after the adoption of the IFRS as measured by discretionary accruals and the value relevance before and after the adoption of the IFRS as measured by the price model (dependent variable: stock price, independent variable: earnings per share and book value per share, control variables: company's size). It shows a revaluation of assets in Indonesia carried out every 5 years can't be illustrated clearly and value relevance before and after the adoption did not experience significant differences. This condition occurs due to the use of fair value in Indonesia that experience various constraints. The constraints such as pay taxes more if the market value is greater than the book value of assets and the additional costs incurred for the

services of assets appraisers causing a reluctance of companies in doing the revaluation. The value relevance after adoption is not increasing to the maximum.

This research gives implications against regulation in Indonesia. The government is expected to harmonize tax rules related to final tax of assets revaluation with PSAK-based IFRS. The company was reluctant to do a revaluation of assets and can improve the quality of accounting information after the adoption of the IFRS. This is because assets are presented based on the fair value and can represent the real condition of the company than those based on historical cost.

This research has some limitations. This research only use earnings management and value relevance to describe the quality of accounting information. Further research may consider other dimension of accounting information quality such as comparability.

REFERENCES

- [1] Barth, Mary E., Wayne R, Mark Lang, and Christopher Williams. 2007. "Accounting Quality: International Accounting Standards and US GAAP". California: Standford University
- [2] Cahyonowati, Nur and Dwi Ratmono. 2012. "Adoption of IFRS and Value Relevance of Accounting Information". *Jurnal Akuntansi dan Keuangan*, Vol 14. pp. 105–115. Semarang: Diponegoro University.
- [3] Conceptual framework. 2012. "The Conceptual Framework for Financial Reporting 2011", (January).
- [4] Dechow, Patricia M., Richard G. Sloan and Amy P. Sweeney. 1995. "Detecting Earnings Management". In *The Accounting Review*, Volume 70. pp. 193-225.
- [5] Dwimulyani, Susi. 2010. "Value Relevance of Accounting Information In Indonesia Stock Exchange". *Jurnal Informasi, Perpajakan, Akuntansi dan Keuangan Publik*, Vol 5. pp. 101-109. Jakarta: Trisakti University
- [6] Eisenhardt, Kathleen M. 1989. "Agency Theory: An Assesment and Review". *The Academy of Management Review*, Volume 14 No. 1. pp. 57-74.
- [7] Elbannan, Mohamed A. 2010. "Accounting And Stock Market Effects Of Internationa Accounting Standards Adoption In An Emerging Economy". *Rev Quantitative Financial Accounting*, Volume 36. pp. 207-245. Egypt: Springer
- [8] Francis, J dan Katherine Schipper. 1999. "Have Financial Statements Lost Their Relevance?". *Journal of Accounting Research*, Volume 37. pp. 319–352.
- [9] Greuning, Van Henny. 2005. *International Financial Reporting Standards: A Practice Guide*. Jakarta: Salemba Empat.
- [10] Ghozali, Imam dan Anis Chariri. 2007. *Accounting Theory*. Semarang: Diponegoro University.
- [11] Ghozali, Imam. 2011. *Applications of Multivariate Analysis using IMB SPSS Program v.19*. Semarang: Diponegoro University.
- [12] Halim, Julia., Carmel Meiden, dan Rudolf Luban Tobing. 2005. "The influence of income smoothing on the extend of the financial statements". *National Accounting Symposium VIII. Solo*
- [13] Harahap, Sofyan Syafri. 2011. *Accounting Theory*. Jakarta: Rajawali Pers.
- [14] Hidayat, Imam. 2014. *IFRS Convergence in Indonesia*. <http://imanfreelance.blogspot.com/2011/05/konvergensi-ifrs-di-indonesia.html>. (17 Desember 2014)
- [15] Ismail, Wan., dan Adibah Wan. 2013. "Earnings quality and the adoption of IFRS-based accounting standards Evidence from an emerging market". *Asian Review of*

- Accounting*, Volume 21 No. 1. pp. 53–73. Malaysia: Emerald Group Publishing Limited.
- [16] Jensen, Michael C, and William H. Meckling. 1976. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure". *Journal of Financial Economics*, Volume 3 No. 4. pp. 305-360.
- [17] Jones, J. J. 1991. Earnings management during import relief investigations. *Journal of Accounting Research* 29 (2): 193-228.
- [18] Kargin, Sibel. 2013. "The Impact of IFRS on the Value Relevance of Accounting Information: Evidence from Turkish Firms". *International Journal of Economics and Finance*, Volume 5 No. 4. pp. 71–80. Canada: Canadian Center of Science and Education.
- [19] Kieso E. Donald, Weygandt J. Jerry dan Warfieldld Terry D. 2008. *Intermediate Accounting Vol.1 and 2*. Jakarta: Erlangga
- [20] Kusumo, Yuro Bimo dan Subekti, Imam. 2014. " Value Relevance of Accounting Information Before and After IFRS Adoption ". *Jurnal Akuntansi*. Malang: Universitas Brawijaya.
- [21] Li, Zining., Qiliang Liu dan Le Luo. 2014. "International Financial Reporting Standards (IFRS) and Earnings Management: Evidence from China". pp 1-48
- [22] Rohaeni, Dian dan Titik Aryati. 2012. "The Effect of IFRS Convergence Toward Income Smoothing; Quality Auditor as Moderation Variable". *National Accounting Symposium XV*.
- [23] Schipper, Katherine. 1989. "Commentary on earnings managements". *Accounting Horizons*, Volume 3. pp. 91-102.
- [24] Scott, William R. 2012. *Financial Accounting Theory Sixth Edition*. Toronto: Pearson Prentice Hall.
- [25] Simamora, Henry. 2000. *Accounting for Business Decision Making Vol II*. Jakarta: Salemba Empat
- [26] Wild, John J., K.R. Subramanyam dan Robert F. Halsey. 2005. *Financial Statement Analysis*. Jakarta: Salemba Empat