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The level of conservatism and earnings management during IFRS adoption

Yie Ke Feliana, Jessica Bagus

Department of Accounting, Faculty of Economics and Business, University of Surabaya
Jl. Kali Rungkut Surabaya, 60293, Indonesia

Abstract

We analysis to determine the level of conservatism and earnings management in the period of IFRS adoption in Indonesia. We used a quantitative approach and was tested using a different group test, i.e. Mann-Whitney U, ANOVA, and MANOVA. The object of this research is all manufacturing companies listed in Indonesia Stock Exchange (IDX) for the period of 2012-2017. The number of samples used in this research is 516 firm-years. Earnings management is measured by two approaches, i.e. accrual earnings management and real earnings management, while conservatism is measured by Basu Model. The level of conservatism and earnings management in this study focuses on after the IFRS adoption period. We reveal that IFRS adoption does not change accounting conservatism in financial statements. In addition, the greater adoption of IFRS is not able to reduce the level of overall earnings management both in accrual earnings management and real earnings management.

Abstrak

Kami menganalisis untuk menentukan tingkat konservatisme dan manajemen laba pada periode adopsi IFRS *di Indonesia. Kami menggunakan pendekatan kuantitatif dan diuji dengan menggunakan uji beda kelompok, yaitu* Mann-Whitney U, ANOVA, *dan* MANOVA. *Objek penelitian ini adalah semua perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia (BEI) periode 2012-2017. Jumlah sampel yang digunakan dalam penelitian ini adalah 516 tahun-perusahaan. Manajemen laba diukur dengan dua pendekatan, yaitu manajemen laba akrual dan manajemen laba riil, sedangkan konservatisme diukur dengan Model Basu. Tingkat konservatisme dan manajemen laba dalam penelitian ini berfokus pada periode setelah adopsi* IFRS. *Kami mengungkapkan bahwa adopsi IFRS tidak mengubah konservatisme akuntansi dalam laporan keuangan. Selain itu, adopsi IFRS yang lebih besar tidak dapat mengurangi tingkat manajemen laba secara keseluruhan baik dalam manajemen laba akrual dan manajemen laba riil.*

✉ Corresponding Author:
Yie Ke Feliana:
Tel +62 31 298 1130
E-mail: yiekefeliana@staff.ubaya.ac.id

1. Introduction

Based upon a report of IFRS Foundation (2018), there are 144 countries that have implemented IFRS for their accounting standards. In line with IFRS Foundation's mission, this standard is expected to improve the quality of financial reporting for transparency, accountability, and efficiency in the global economy. Although IFRS has been adopted by many countries, thus far how it affects the quality of accounting information has not reached any conclusive results, as specified in Trimble's study (2018).

The Indonesian Institute of Accountants (IAI) is an organization authorized to create financial accounting standards in Indonesia. After a preliminary reference to the US Generally Accepted Accounting Principle (US GAAP), in 1994 IAI developed a standard referred to as the International Accounting Standards (IAS) (which was afterward modified to International Financial Reporting Standards (IFRS) in 2001). By that time the financial accounting standards were revised several times, as for particular standards – referred to as Statement of Financial Accounting Standards/PSAK) pertained to international accounting standards, while others remained using PSAK that had been formerly designed on basis of local needs. From that moment on, in 2008 IAI declared a commitment to the convergence of IFRS. The first phase began in 2012 with reference to IFRS standards with 3 years' time lag. The second phase began in 2015 by reducing the time lag for up to 1 year (Indonesian Institute of Accountants, 2018). Indeed the preferred approach of the convergence process to IFRS is a gradual one, not "big bang".

The adoption of international accounting standards is envisioned to improve the information quality of the company's financial reporting. Based on a conceptual framework of financial reporting (IAI, 2018), the financial reporting aims at providing beneficial information for decision making by external parties. The main goal of financial reporting is to gain limited access to companies for acquiring direct information through financial statements in order to ensure the information asymmetry between company management and external parties can be minimized by disclosing financial reporting.

Based on some empirical studies, the information in financial reporting has been frequently modified to meet certain goals, referred to as earnings management. Earnings management is often set as a measure of the quality of company financial reporting. Some previous studies about the effect of IFRS adoption on earnings management resulted in various outcomes. Some researchers argued that IFRS adoption reduce earnings management (Barth, Landsman, & Lang, 2008; Iatridis & Sotiris, 2010; Zéghal, Chtourou, & Sellami, 2011; Dimitropoulos et al., 2013; Pelucio-Grecco et al., 2014; Baig & Khan, 2016), while other studies suggested an increase in earnings management (Callao & Jarne, 2010; Capkun, Collins, & Jeanjean, 2016; Oz & Yelkenci, 2018; Malikov, Manson, & Coakley, 2018), even some studies indicate no effect of earnings management (Jeanjen & Stolowy 2008; Wang & Campbell 2012; Doukakis, 2014; Brice, Ali, & Maher, 2015; Trimble, 2018). Most of the studies had used accrual earnings management (AEM). Meanwhile, studies used real earnings management (REM) were fewer and created different outcomes (Doukakis, 2014; Oz & Yelkenci, 2018; Trimble, 2018).

Accounting conservatism is no longer regarded as the main principle in the conceptual framework of International Financial Reporting Standards (IFRS). Therefore, it prompts further research to empirically examine the impact of IFRS application on the conservatism level of financial reporting. Some previous studies have not reached any conclusive outcomes in establishing evidence of the decrease in conservatism level. In fact, there are some studies that validate an increase in conservatism (Barth et al., 2008; Guenther et al., 2009; Dimitropoulos et al., 2013), while other studies demonstrate the decrease in conservatism (Hellman,

2011; Hou, Jin, & Wang, 2014; Manganaris, Spathis, & Dasilas, 2015).

The Indonesian data in this research portrays an approach of gradual adoption that provides research contribution which is different from any previous studies from other countries. An approach of gradual adoption is supposedly more capable of evaluating the impact of IFRS adoption on the quality of financial reporting. It allows sufficient time for companies to learn and implement new accounting standards based on PSAK which cannot be executed at once. Indonesia has been adjusting these accounting standards since 1994. The impacts of IFRS accounting standards are expectedly isolated from any interferences of the transitioning processes that could disrupt the learning process in the company. On the contrary, a comparison of before and after IFRS adoption as previous studies did suggest some companies were encouraged to directly implement the standards overall (which consisted of 50-60 PSAK) which were different from a year ago that had implemented an old accounting standard.

Considering objectives envisioned in the IFRS adoption as well as the long period of the IFRS convergence process in Indonesia, an evaluation is definitely required to measure the improved quality of financial reporting in Indonesia. Up to the present, there have been few studies in Indonesia undertaking similar interests. On the contrary, recent studies from other countries that have adopted IFRS have not yielded any conclusive results. Studies from other countries employ data from those who have adopted IFRS with an approach of "big bang", not gradual one like Indonesia, that would likely result in different outcomes. Therefore this study seeks on evaluating the quality development of financial reporting in Indonesia, mainly on earnings management and conservatism during the adoption of IFRS.

Employing data of 516 manufacturing companies in Indonesia during the 2012-2017 periods, this study revealed both accrual and real management declined over the past 6 years which was non-

significant, except for a decline in real earnings management production costs. Instead, conservatism had increased in 2012-2016 then eventually decreased in 2017. The research findings provide a contribution to the financial accounting standards board (DSAK IAI) in Indonesia that the adoption of IFRS over the past 6 years has not produced significant improvements in the quality of corporate financial reporting in Indonesia. This outcome might be due to the need for improvement in Indonesian institutions that encourage companies to produce financial reporting, as stated by Ball, Robin, & Wu (2003), along with the quality accounting standards.

In the next section, a literature review explains the conceptual framework as well as the research method. The research finding is discussed in the next section and eventually drawn to a close with a conclusion.

2. Hypotheses Development

This study has an underlying agency theory proposed by Jensen & Meckling (1976). Financial reporting offers a solution to solve agency problems between principals and agents in companies. The principal demands information as well as monitor over fund management that have been invested to companies, whereas the agent holds responsibility in managing the company. For that reason, quality financial reporting is required. One of the necessary attempts is improving the existing accounting standards to determine three major things. First, recognition (what will be recorded and when it is recorded), second measurement (how it will be measured in terms of money value), and third, reporting and disclosure (in which part of the financial statement will be reported and what additional information for mandatory disclosure).

The impact of IFRS on earnings management

The earnings management is an option that the company's management might consider over

existing accounting policies as well as real activities of the company with the purpose of influencing the number of reported earnings based on certain goals (Scott, 2015). Earnings management can be carried out through (1) accounting policies or accrual earnings management (AEM) and (2) through real activities or real earnings management (REM). AEM is performed by selecting accounting methods, judgment, and estimations of existing accounting (Scott, 2015). REM is employed by managing real activities of the company such as excessive production, sales discounts, time arrangement for advertising, research and development activities (Roychowdhury, 2006).

The earnings management distorts information presented by the company and does not represent its actual conditions. Even though it might work otherwise, it also is carried out for the benefits of a company in which to overcome blocked communication as well as a means of signaling to the market (Scott, 2015).

The main characteristics of IFRS that are principle-based and dominantly market-based are regarded as better at reflecting the condition and performance of the company (Spiceland et al., 2018). The modification of accounting standards from local standards to IFRS was examined by measuring the quality of the company's financial reporting after a new standard is enacted. One of which is by measuring the level of corporate earnings management. On the other hand, IFRS seemingly offers a higher opportunity for companies to conduct earnings management based on the inherent risk of principle-based (Christensen et al., 2015; Lippens, 2008; Callao & Jarne, 2010; Ahmed, Neel, & Wang, 2013; Zéghal et al., 2011). Nevertheless, IFRS appears workable to improve the quality of accounting information through mandatory disclosures that increase opportunities for external parties in detecting earnings management.

Yet some research findings reveal the modification of accounting standards impact directly to the accounting policies. Therefore, the adoption of

IFRS could reduce AEM practices. On the contrary, as for earnings management is needed by companies to achieve particular goals either opportunistic or efficient ones, the increase in REM expectedly prevails through the company's operational policy actions.

Several studies found that IFRS adoption reduces AEM (Barth et al., 2008; Iatridis & Sotiris, 2010; Zéghal et al., 2011; Dimitropoulos et al., 2013; Pelucio-Grecco et al., 2014; Baig & Khan, 2016). Instead, other studies demonstrate an increase in AEM (Callao & Jarne, 2010; Capkun et al., 2016; Oz & Yelkenci, 2018; Malikov et al., 2018). Meanwhile, other studies demonstrate no difference in AEM before and after the adoption of IFRS (Jeanjen & Stolowy 2008; Wang & Campbell 2012; Doukakis, 2014; Brice et al., 2015; Trimble, 2018).

As for REM, Oz & Yelkenci (2018) found that 14 countries experience non-significant changes REM after the adoption of IFRS, with the exception of real earnings management through discretionary expenditure which underwent a significant decrease. In line with these findings, Doukakis (2014) and Trimble (2018) confirmed non-significant changes in REM after the adoption of IFRS.

All these studies employed data from countries that have adopted IFRS all at once and at the same time ("big bang"). By using data from companies in Indonesia that have adopted IFRS step by step and following the inconclusive findings of previous studies, this study proposes a non-directional hypothesis.

H_1: IFRS adoption in Indonesia influences both accrual and real-based earnings management

The impact of IFRS on accounting conservatism

Accounting conservatism is not regarded as one of the major accounting principles in the Financial Reporting Framework of IFRS. Scott (2015) defines conservatism as the precautionary principle in financial reporting, especially companies that post-

pone to recognize and measure both assets and profits, but immediately recognize any possible losses and debts. Hellman (2011) argued when compared to conventional accounting, IFRS emphasizes relevant records that develop higher dependence on estimates and various judgments. In this matter, policies issued by IASB (International Accounting Standard Board) trigger off lower pressure on the consistent application of conservative accounting in financial reporting based on IFRS. Despite several studies (Ball, Kothari, & Robin, 2000; Lang et al., 2003, 2006; Leuz et al., 2003, Ball & Shivakumar, 2005, 2006; Conover, Miller, & Szakmary, 2008) argue that one of the characteristics in the quality earnings is conservatism. As conservatism counterbalances management bias that is likely over-optimistic, therefore it stands in need of creditors and other parties in contracts with companies.

The previous findings on the impact of IFRS adoption on conservatism level are diverse. A study by Barth et al. (2008), Guenther et al. (2009), and Dimitropoulos et al. (2013) demonstrated the impact of IFRS adoption on the increase in conservatism level. Other studies state otherwise, suggesting IFRS adoption decreases the level of conservatism (Hellman, 2011; Hou et al., 2014; Manganaris et al., 2015).

All research findings used company data in countries that have adopted IFRS in one time and produced non-conclusive results. Therefore, this study proposes a non-directional hypothesis

H_2: the adoption of IFRS in Indonesia influence the level of accounting conservatism

3. Method, Data, and Analysis

Indonesian Financial Accounting Standards that have adopted IFRS are mandatory for any business entities that have significant public accountability (issuing shares or debt securities) in all types of industries (Circular of financial service authority No.30/SEOJK.04/2016 concerning the form and content of the Issuer's Annual Report or a public com-

pany). Thus the research problem existed in all business entities listed on Indonesia Stock Exchange (IDX). Yet the selection of population is limited to manufacturing companies due to both accrual and real-based earnings management models which have been commonly used based on the residual value of the regression among variables that expectedly influence regularly affect total accruals (in AEM), operating cash flows (REM- CFO) and production costs (REM-PROD). For that reason, the modeling covers companies that come from similar types of business to ensure a valid measurement of earnings management. The concern is abnormality value (residual) that certainly varies among industry types. On the other hand, this study avoids a very narrow limit of objects because the research problems occur in all types of listed companies in Indonesia. Thus, to mitigate the two issues, the research object is limited to manufacturing companies that have similar but non-exclusive types the same way as classification of nine types of industries on the IDX. Aside from that, the selection of the manufacturing industry as a measure of REM demands information on production costs that only prevail in manufacturing companies.

Moreover, the selected time period is 2012-2017, since 2012 is the early term of DSAK IAI that had implemented IFRS adoption with three years lag time. In the following years, some Statement of Financial Accounting Standards (PSAK) as part of complete Financial Accounting Standards (SAK) are continually modified to adjust with the modification of IFRS. 2017 is the final year of investigation on the latest data available during research period. By employing data from that period, it includes 2 stages of IFRS adoption in Indonesia, these are period of 2012-2014 when SAK had three years lag from IFRS and period 2015-2017 when SAK is 1-year lag from IFRS.

The sampling technique in the study is non-probability sampling with purposive judgmental sampling because the sampling data has met some established criteria. Data sources are acquired from

company's annual report and IDX fact book down-loaded on website of IDX.

The sample of initial research includes 906 company-years. Of the total sample, only 516 company-years is selected as sampling, demonstrated in Table 1. The selected sample must include companies that have entire data for 6 years (2012-2017) because this study is aimed at investigating the development of accounting information quality during that period. Thus this study employs a longitudinal time horizon.

The first variable is accrual earnings management (AEM) which is proxy through Discretionary Accruals (DA). Meanwhile DA was estimated using the model of Kothari et al. (2005) as follows:

$$DA_{it} = TA_{it}/A_{it} - (\beta_0 + \beta_1(\Delta REV_{it} - \Delta AR_{it})/A_{it-1} + \beta_2 PPE_{it}/A_{it1} + \beta_3 ROA_{it}) \quad (1)$$

Where: TA_{it} = total accruals at company i year t obtained from net income minus cash flow from operating activities; ΔREV_{it} = the difference in revenue in company i between years' t and t-1; ΔAR_{it} = the difference between the account receivable with company i between years' t and t-1; PPE_{it} = property, plant and equipment in company i year t; ROA_{it} = return on assets in the company i year t; A_{it-1} = total assets in company i year t-1

Moreover, the second variable is real earnings management (REM) which is proxied through Residual Cash Flow from Operations (R_CFO) and Residual Production Cost (R_PROD). In addition to this, R_CFO and R_PROD are measured using the Roychowdhury (2006) model as follows:

$$R\_CFO_{it} = CFO_{it}/A_{it-1} - ((\beta_1[1/A_{it-1}] + \beta_2[S_{it}/A_{it-1}] + \beta_3[\Delta S_{it}/A_{it-1}])/A_{it-1}) \quad (2)$$

$$R\_PROD_{it} = PROD_{it}/A_{it-1} - ((\beta_1[1/A_{it-1}] + \beta_2[S_{it}/A_{it-1}] + \beta_3[\Delta S_{it}/A_{it-1}])/A_{it-1}) \quad (3)$$

Where: R_CFO_{it} = residual cash flow from operations at company i year t; R_PRODit = residual production cost in company i year t; CFO_{it} = cash flow from operations at company i year t; A_{it-1} = total assets in company i year t-1; S_{it} = revenue in company i in year t; ΔS_{it} = difference of revenue in company i between years t and t-1; ΔS_{it-1} = difference of revenue in company i between years t-1 and t-2; $PROD_{it}$ = production cost = COGSt + ΔINVt s

Production costs are not available from published financial statements, therefore their proxy is the cost of goods sold and changes in the value of finished goods inventory, presuming all goods produced were sold out in that year (Roychowdhury, 2006).

Tabel 1. Sampling criteria

Information	Number of companies	Total
Manufacturing business entities listed on the IDX in 2017	151	906
Delisted companies from 2010	(18)	(108)
Listed company from 2010	133	798
Companies were not listed consecutively from 2012-2017	(11)	(66)
Companies are listed in succession	122	732
Companies whose financial statements do not use the Indonesian Rupiah (IDR) and do not close the books as of December 31	(30)	(180)
The company whose financial statements use Rupiah (IDR) and close the book on December 31	92	552
Companies whose information in the Annual Report does not explain the data needed by researchers	(6)	(36)
Total sample of manufacturing business entities that can be used for research	86 companies	516 year companies

Non-discretionary accruals, normal operating cash flow, normal production costs are estimated using the model of Kothari et al. (2005) and model of Roychowdhury's (2006) using 6-year data (2012-2017) for all companies classified in one category of the manufacturing industry.

Conservatism will be measured using the Basu model (1997). Even though some criticized the measurement of conservatism using the Basu model (Dietrich, Muller, & Riedl, 2007; Gigler & Hemmer, 2001; Givoly, Hayn, & Natarajan, 2007; Patatoukas & Thomas, 2011), it remains well-known and widely used model (Ball et al., 2013). The Basu Model is shown in the following.

$$EPS_{it}/P_{it} = a_1 + a_2DR_{it} + a_3RET_{it} + a_4DR_{it} * RET_{it} + \varepsilon_{ijt} \quad (4)$$

Where: EPS_{it} = earnings per share in company i year t; P_{it} = price per share in company i year t; DR_{it} = dummy variable 1 for return on company i year t negative, 0 for the others; RET_{it} = stock return on company i year t, the stock market price is taken 3 months after closing the book taking into account when the deadline for financial statements must be published

The coefficient of DRit*RETit is a variable used to measure the level of conservatism, i.e., the EPS response following negative stock return in the market. The greater and more positive this coefficient, the higher likely of bad news assessed by the market reflected in the greater information in financial statements represented by the EPS variable. It indicates higher level of conservatism.

The results of DA, R_CFO and R_PROD variables wll be analyzed using different test groups of Mann-Whitney U, ANOVA, and MANOVA. Due to its form of coefficient, conservatism will be analyzed for its trends within six years.

4. Results

An overall overview of all variables appears in Table 2. AEM that is estimated with a mean value of DA variable demonstrates a negative mean close to zero (-0.00081892). REM operating cash flow estimated with mean value of R_CFO variable for six years is 0.086599, while REM production cost is estimated with the mean value of R_PROD variable is 0.11232543. Therefore among these three measures of earnings management, REM production cost has

Table 2. Descriptive statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
TA /Ait-1	516	-1.6087	1.6640	-0.0250	0.1495
(delta REV-delta AR) /Ait-1	516	-1.6531	4.6788	0.0765	0.3283
PPE /Ait-1	516	0.0008	1.4778	0.0765	0.3283
ROA	516	-55.0000	72.0000	5.0271	9.9028
NDA	516	-0.2944	0.2808	-0.0242	0.0598
DA	516	-1.4611	1.6221	-0.0008	0.1396
CFOit/Ait-1	516	-0.3793	1.3618	0.0866	0.1306
1/Ait-1	516	0.0000	0.0250	0.0017	0.0029
Sit/Ait-1	516	0.0040	14.1094	1.2078	0.9293
Delta Sit/ait-1	516	-1.9632	5.7007	0.0931	0.3696
NCFO/ait-1	516	-0.0045	0.0021	0.0000	0.0003
R_CFO	516	-0.3793	1.3618	0.0865	0.1306
PRODit/Ait-1	516	-0.2602	13.7883	0.9351	0.8772
Delta Sit-1/ Ait-1	516	-3.3172	2.9416	0.0797	0.3002
NPROD/ait-1	516	-0.2080	12.3764	0.8228	0.8688
R_PROD	516	-1.2808	3.1432	0.1123	0.5426
EPSit/Pit	516	-7.2191	1.3846	-0.0049	0.4413
RET	516	-94.1666	2686.0000	16.1279	130.0517
*DR*RET*	516	-94.1666	0.0000	-11.6030	18.2538

Table 3. Mann-Whitney U Test results in 2012 and 2017

Variable	Year	N	Mean rank	Mann-Whitney U	Asymp. Sig. (2-tailed)
DA	2012	86	85.27	3592.000	0.745
	2017	86	87.73		
R_CFO	2012	86	92.94	3144.000	0.090*
	2017	86	80.06		
R_PROD	2012	86	127.97	132.000	0.000***
	2017	86	45.03		

*** = significant at the 1% level, * = significant at the 10% level

the largest absolute value. For measuring conservatism, frequency descriptive statistics from 516 samples demonstrate 242 (46.6%) of negative returns and the remaining 274 (52.4%) has positive returns over the 6-year observation period. From that point, the number of companies that experience both negative and positive returns is almost equal.

Table 3 demonstrates the results of different group tests on the magnitude of AEM and REM that compare the initial year of 2012 and the end year of 2017 in the IFRS adoption period. AEM indicates a non-significant difference. The result is consistent with REM on cash from operating activities which indicates a non-significant difference; however, REM production activity indicates a significant difference.

In addition, One Ways ANOVA testing is carried out to understand whether AEM and REM experience significant differences when examined from overall years. The test compares one dependent variable with one fixed factor, i.e. year.

Table 4, Table 5, and Table 6 demonstrate the testing results between year group of accrual and real earnings management. From the testing result of One Ways ANOVA, it can be presumed that no difference occurs between AEM and REM in cash from operating activities during IFRS adoption. However, REM for production activities has significant differences during IFRS adoption.

Table 4. One Ways ANOVA Test results for DA variables

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	0.001	5	0.000	0.011	1.000
Within Groups	9.822	510	0.019		
Total	9.823	515			

Table 5. One Ways ANOVA Test Results for the R_CFO variable

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	0.112	5	0.022	1.312	0.257
Within Groups	8.680	510	0.017		
Total	8.792	515			

Table 6. One Ways ANOVA Test Results for the R_PROD variable

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	98.772	5	19.754	190.536	0.000***
Within Groups	52.876	510	0.104		
Total	151.648	515			

*** = significant at the 1% level

After that Multivariate Analysis of Variance (MANOVA) is carried out to examine the effect of year on AEM, REM operating cash flow and REM production costs. The testing results indicate differences in the level of earnings management both accruals and real-based operating cash flows as well as production costs during IFRS adoption, suggesting the significant value smaller than 0.05 of Wilks' lambda which is 0.000 (Table 7).

Because the testing demonstrates differences in results between ANOVA and MANOVA, the research also undertakes another test of univariate. This testing is aimed at robustness check whether earnings management experiences significant differences when measured using the variable of year. In this test, three dependent variables are brought into one and compared to one fixed factor, i.e. year. Based on the univariate test, there is the significant difference during the adoption of IFRS in real earn-

ings management of production activities due to smaller significant value less than 0.05 that is 0.000 that is consistent with the results of ANOVA, except period between 2013 and 2014, and between 2015, 2016 and 2017.

Table 8 shows the results of the regression test using the Basu Model to examine the impact of accounting conservatism in the financial statements from 2012 to 2017. Accounting information only discovers conservatism in 2014 with a significant positive coefficient, but then again in other years accounting information does not reveal any significant difference in the recognition between bad news and good news.

5. Discussion

IFRS adoption in Indonesia affects the level of earnings management

The result of group different test between 2012 and 2017, one way ANOVA for an overall year and univariate test indicate consistent results for real earnings management (REM) through significant

production costs. For this reason, IFRS adoption for the past 6 years has prevailed in reducing REM only through production activities.

To be specific, the univariate test results of real earnings management of production costs reveal significant differences from 2012 to 2013, suggesting a significant decrease, and there was a significant change from 2014 to 2015, suggesting a significant increase. These two years (2012 and 2015) are initial years of first and second stages of IAI implementation. Therefore the overall modification of standards based on IFRS with a three years time lag has a positive impact on the quality of financial reporting by a significant decrease in REM production costs. Yet when IAI employs the second stage, there is a significant increase in REM production costs even though it is still far below the value in 2012.

To understand more in-depth about the fluctuation of means value of AEM and REM over a period of 6 years, Figures 1, 2 and 3 can be used to understand trends in mean value of AEM, REM operating cash flow and REM production costs.

Table 7. Significance results of the MANOVA Test

	Effect	Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.538	197.053	3.000	508.000	0.000***
	Wilks' Lambda	0.462	197.053	3.000	508.000	0.000***
	Hotelling's Trace	1.164	197.053	3.000	508.000	0.000***
	Roy's Largest Root	1.164	197.053	3.000	508.000	0.000***
Year	Pillai's Trace	0.691	30.532	15.000	1530.000	0.000***
	Wilks' Lambda	0.325	47.037	15.000	1402.766	0.000***
	Hotelling's Trace	2.031	68.594	15.000	1520.000	0.000***
	Roy's Largest Root	2.006	204.654	5.000	510.000	0.000***

*** = significant at the 1% level

Table 8. Coefficient of accounting conservatism

|	DR*RET 2012	DR*RET 2013	DR*RET 2014	DR*RET 2015	DR*RET 2016	DR*RET 2017
Unstandardized beta	-0.002	0.001	0.007	0.007	0.010	-0.001
Sig. t-test	0.253	0.607	0.019**	0.070*	0.075*	0.933
Sig. F-test	0.324	0.799	0.021**	0.111	0.219	0.703

**significant at the 5% level, *significant at the 10% level.

Based on Figure 1, AEM had experienced significant decline from 2012 to 2013, yet it then increased again and remains stable with a value lower than before 2012. Thereby AEM indeed decreased during the adoption period of IFRS, yet it was not significant.
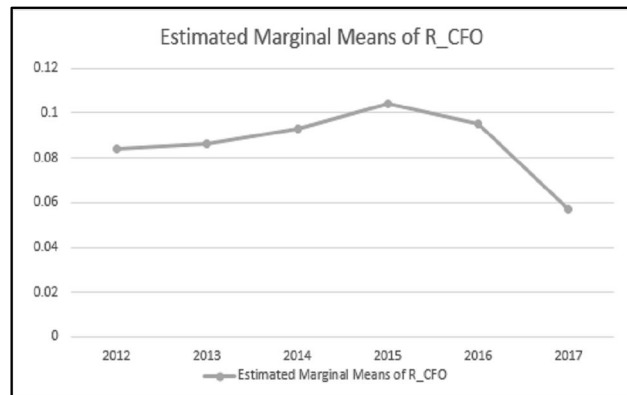
Real earnings management through operating cash flow in 2012-2015 went a slight increase, which was followed by a decrease from 2015-2017 with a value lower than the value in 2012. Real earnings management through production activities significantly declined from 2012 to 2013, but it rose again and since 2015 it has been relatively stable with a value lower than that of 2012. The trend of real earnings management of production costs over the 6 year period of observation (figure 3) is in line with the trend of accrual earnings management (Figure 1).

The result is presumed to be related to overall IFRS adoption that leads companies to reduce real earnings management activities by overproduction with the intention of increasing earnings for that period. Companies are more concerned about the long-run impacts of additional costs for handling inventory and any potential obsolescence of inventory value in the future. It is consistent with inventory valuation in PSAK 14/IAS 2 that implements Lower Cost or Net Realizable (LCNR), in such a way when the net realizable value expectedly declines as a result of obsolescence, the inventory value will decline by recognizing the expense.

To a large extent, the results of groups' different tests, both ANOVA and MANOVA, confirm that the larger adoption of IFRS in Indonesia does not significantly influence earnings management, except real earnings management through production activities. This research finding related to AEM is consistent with Jeanjen & Stolowy (2008), Wang & Campbell (2012), Doukakis (2014), Brice et al. (2015), and Trimble (2018), while REM conveys non-significant effect, consistent with the previous study by Doukakis (2014) and Trimble (2018).
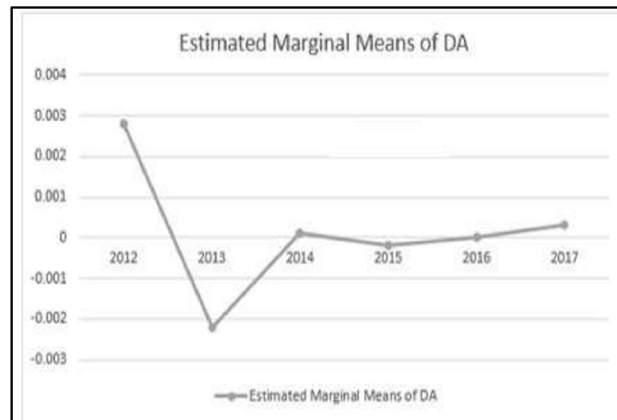
Figure 1. Development of accrual earnings management from 2012-2017

Figure 2. Development of real earnings management for operational cash flow in 2012-2017
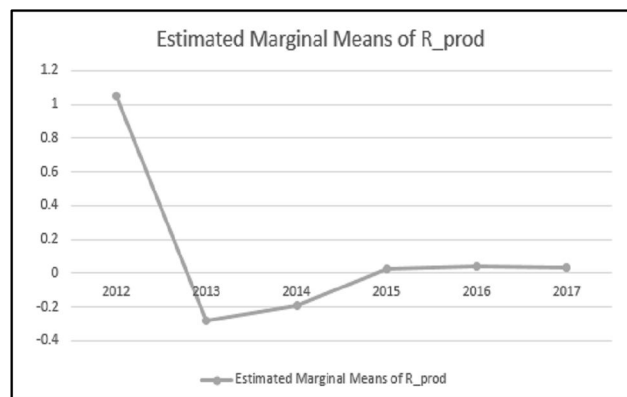
Figure 3. Development of real earnings management in production activities from 2012-2017

Based on the testing results, we can conclude that H$_1$ was rejected. The results of tests cannot produce any evidence that the adoption of IFRS in Indonesia can influence earnings management intensively. In actual fact, the adoption of IFRS has a positive impact on minimizing accrual and real earnings management. Under any circumstances, this impact must be strengthened by enforcement and institution that urges faithful representation reflected on the company's financial reporting, with the purpose of reducing earnings management significantly and sustainably as part of improving the quality of financial reporting. Maintaining quality, in the long run, is required to monitor fluctuating trends of earnings management that indicates the determination of a company's management to adjust with changes in financial accounting standards. This discourse is in line with research findings from Ball et al. (2003), stating that the adoption of quality accounting standards alone is insufficient to improve the quality of financial reporting in countries.

The adoption of IFRS in Indonesia changes the level of accounting conservatism

Based on the estimation results of the Basu Regression Model as shown in Table 8, the accounting information in the company's financial statements was only conservative in 2014 around the same time when the F test result was significant. Based on the results of standard modification both comprehensively and per PSAK, there is no specific standard that affects conservatism in that year. Further studies need to be taken by considering external and internal factors during the year.

Figure 4 illustrates the trend of accounting conservatism from year to year. Based on entire results, the level of conservatism had increased since 2012 but then dropped down in 2017 even though remains above the level of conservatism before the early investigation in 2012 and it is not significant.
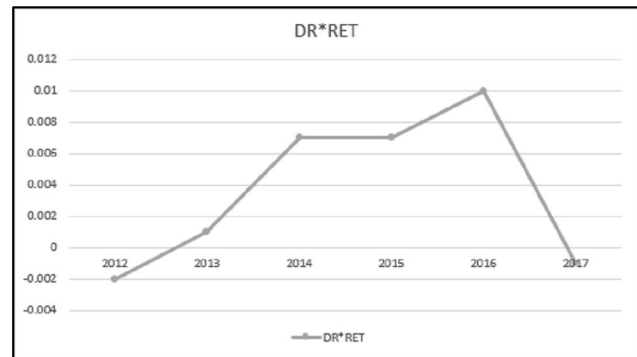

Figure 4. Development of accounting conservatism levels from 2012-2017

The research findings are not consistent with previous studies that revealed both an increase in conservatism (Barth et al., 2008; Guenther et al., 2009; Dimitropoulos et al., 2013) and decrease in conservatism (Hellman, 2011; Hou et al., 2014; Manganaris et al., 2015).

Based on the testing results, it leads to the conclusion that H2 is rejected. They are unable to reveal that the adoption of IFRS in Indonesia can influence accounting conservatism in financial reporting.

In the beginning, the adoption of IFRS in Indonesia improved conservatism that suggested an improvement in the quality of financial reporting. Yet in the last year of investigation, the conservatism declined. It needs further research to see whether the decreasing trend of conservatism sustains in the following years. If the decline persists, it will demonstrate that IFRS does not positively contribute to conservatism by failing to mention specifically the qualitative characteristics of financial reporting in the Financial Reporting Conceptual Framework. It would seem reasonable because many account measurement in IFRS employs fair value.

The fair value will fluctuate in conformity with current conditions, therefore the ability of financial reporting to reflect bad news and good news that

is initially epitomized by the market is equal. For that reason, the accounting information is not much more conservative, which highlights the recognition of bad news which is more fast-tracked than good news.

6. Conclusion

This study investigates whether the level of earnings management and conservatism, which characterizes the quality of financial reporting, change throughout the period of IFRS adoption. Out of the data analysis, it leads to the following conclusions. As it appears from the testing results of Mann-Whitney U, ANOVA and MANOVA, it has been proven that significant differences only occurred in real earnings management for production activities, particularly in 2012 and 2015 in the time of IFRS adoption. Despite the fact, the adoption of IFRS that is larger in number and smaller in time difference does not affect the level of accrual and real based earnings management through operating cash flow. The level of accrual earnings management and real earnings management in cash from operating activities indeed decline but non-significant. Accounting conservatism had increased throughout the adoption period of IFRS, yet in the last year of observation in 2017, the accounting conservatism declined. It validates the adoption of IFRS does not affect accounting conservatism in the company's financial statements.

This study acknowledges some limitations. For instance, this study assumes that external environmental factors and the company's internal conditions are constant during the observed period, in such a way that changes in the quality of financial reporting are mainly resulting from the existing financial accounting standards. Suggestion for further studies is to take into account the external environmental factors and company characteristics to prevent any outcomes as primary result of financial accounting standards.

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