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IFRS AND EARNINGS MANAGEMENT IN INDONESIA: THE EFFECT OF INDEPENDENT COMMISSIONERS

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ABSTRACT

This research aims at examining the effect of IFRS adoption on earnings management and also investigates the effect of independent commissioners on the relationship between IFRS adoption and earnings management. The sample of this study consists of non-financial firms with 1,127 firm-years observations during 2007 – 2010 from the Indonesian Stock Exchange. The result of the study shows that accrual earnings management decreases after the adoption of IFRS. However, the independent commissioners have positive effect on the relationship between IFRS and accrual earnings management. This result shows that independent commissioners might not be effective in mitigating earnings management. Further test on the effect of IFRS adoption on real earnings management shows that discretionary expenses have decreased. However, real earnings management: production costs and cash flows increased after the adoption. The interaction of independent commissioners and IFRS was found to be positively affecting discretionary expense and negatively affecting production costs. The result of the study shows that companies switch to real earnings management after IFRS adoption.

Keywords: IFRS; Accrual earnings management; Real earnings management; Independent commissioners

1. INTRODUCTION

This research aims at examining the effect of IFRS adoption on earnings management. Previous research on the effect of IFRS mostly focus on accrual earnings management, for examples, Callao and Jarne (2010), Ismail, Kamarudin, Zijl, and Dunstan (2013), Jeanjean and Stolowy (2008), Houqe, van Zijl, Dunstan, and Karim (2012), Pelucio-Grecco, Geron, Grecco, and Lima (2014), Zeghal, Chtourou, and Fourati (2012). IFRS are principle-based standards that require extensive disclosure and market-oriented measurements. International Accounting Standard Board (IASB) also reduces the alternative measurement methods in the IFRS. Based on this condition, it is

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expected that IFRS will minimize earnings management (Dimitropoulos, Asteriou, Kousenidis, & Leventis, 2013). However, IFRS still provide room for managers to use their judgment or discretions to manage earnings. The results on the effect of IFRS adoption on earnings management are not consistent. Houqe et al. (2012), Ismail et al. (2013) and Pelucio-Grecco et al. (2014) find that earnings quality increases after the IFRS adoption. There is a decrease in earnings management after the IFRS adoption. However, other studies such as Ahmed, Chalmers, and Khlif (2013), Van Tendeloo and Vanstraelen (2005) and Wang and Campbell (2012) find no difference in earnings management before and after the IFRS adoption. On the other hand, Ahmed, Neel, and Wang (2013), Callao and Jarne (2010) and Jeanjean and Stolowy (2008) find earnings management increases after the adoption of IFRS.

Sarbanes Oxleys Act (SOX) asserts more pressure on regulators to monitor accrual activities. Therefore, Graham, Harvey, and Rajgopal (2005) in their seminal work show that managers in the US prefer to engage in real activities to manage earnings. Thus, managers have two options: accrual or real activity to manage earnings. Gunny (2010) and Zang (2012) show that managers use both methods to manage earnings. Recent studies on the effect of IFRS on earnings management using both accrual and real earnings management found that the level of discretionary accrual has decreased after the IFRS adoption, but the level of real activities has increased (Ferentinou & Anagnostopoulou, 2016; Ho, Liao, and Taylor, 2015). However, Doukakis (2014) find no difference in accrual and real earnings management before and after the IFRS adoption.

Previous studies on the effect of IFRS on earnings management provide inconclusive result. There is evidence that IFRS have negative effect on earnings management (Chen, Tang, Jiang, & Lin, 2010; Houqe et al., 2012; Ismail et al., 2013; Pelucio-Grecco et al., 2014). IFRS have increased earnings quality. On the other hand, there is evidence that IFRS positively affect earnings management (Callao, Jarne, & Laínez, 2007; Gastón, García, Jarne, & Gadea, 2010; Kabir, Laswad, & Islam, 2010). Further, Bryce, Ali, and Mather (2015); Doukakis (2014) and Van Tendeloo and Vanstraelen (2005) find no significant effect of IFRS adoption on earnings management. The inconclusive results of the effect of IFRS on earnings management might be due to different level of investor protection (Houqe et al., 2012). In the early studies, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998, 2000) argue the importance of investor protection to finance and corporate governance structure. It is expected that countries with strong investor protection will have better earnings quality.

Previous studies on the effect of IFRS on earnings management show that IFRS adoption in the countries with low investor protection increases earnings quality (Houqe, Easton, & van Zijl, 2014). Houqe et al. (2014) use German, France and Sweden as their sample. Although these three countries are categorized as low investor protection countries, they have strong enforcement on regulation. Houqe et al. (2012) on their cross countries study shows that IFRS adoption per se has no significant effect to mitigate earnings management. However, there is a significant decrease in earnings management in the countries with strong investor protection. This result supports the importance of investor protection to provide better earnings quality. Thus, the adoption of IFRS is better in the countries with strong investor protection. This result is in line with Daske, Hail, Leuz, and Verdi (2008) who argue that strong enforcement of investor protection provides positive effect on firm transparency. These studies provide evidence on the importance of investor protection to

analyze the effect of IFRS adoption on earnings management (Daske et al., 2008; Houqe et al., 2014).
Soderstrom and Sun (2007) argue that the effectiveness of IFRS adoption depends on the country institutional context. Carmona and Trombetta (2008) also suggest that research on the adoption of IFRS in emerging markets is a relevant area of research. La Porta et al. (1998, 2000) argue on the importance of level of investor protection to analyze the institutional context of the country. Therefore, this study investigates IFRS adoption in an emerging market with low level of investor protection. This study investigates the effect of IFRS adoption on earnings management in Indonesia as Indonesia is a French-law-country that has low score on investor protection (La Porta et al., 1998).

One of important mechanisms to protect investor interest is corporate governance mechanism. One of important elements in corporate governance is independent directors. It is expected that independent directors work closely to monitor the managers. Previous studies such as Klein (2002), Peasnell, Pope, and Young (2005), Wu, Chen, and Lee (2016) provide evidence that independent directors have negative effect on earnings management. Indonesia uses two tier board systems: Board of Commissioners (BoCs) and Board of Directors (BoDs). Board of directors is responsible for managing and representing the firm while board of commissioners is responsible for supervising and giving advice to the directors (Republic of Indonesia Law No.40/2007). Independent commissioners are one of the important corporate governance mechanisms. A study in Indonesia by Ancella (2011) shows that board of commissioners in Indonesia has a positive effect on earnings informativeness. Board of commissioners has increased the earnings informativeness in Indonesia. It is expected that independent commissioners provide positive effect on financial statements quality. Marra, Mazzola, and Prencipe (2011) provide evidence that independent directors mitigate earnings management during IFRS adoption. This study also investigates the effect of independent commissioners on the effect of IFRS adoption on earnings management.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. IFRS and Accrual Earnings Management

IFRS is an important development in the international accounting standards. To date, more than 120 countries agreed to adopt IFRS. Brown (2011) argued that the adoption of IFRS provides benefits such as increase reliability and transparency of financial statements. It is expected that the quality of financial statements is better compare to prior adoption of the IFRS. Therefore, the level of earnings management decreased after the IFRS adoption. Joshi, Yapa, and Kraal (2016) investigate the perception of professional accountants on IFRS in Malaysia, Singapore and Indonesia. The result of their research shows that accountants strongly support the adoption of the IFRS. They believe that the IFRS give economic benefits to the country.

Recent empirical evidence on the effect of IFRS adoption on earnings management is inconclusive. Van Tendeloo and Vanstraelen (2005) investigate the effect of voluntary IFRS adoption on accrual earnings management. The sample of their research consists of 636 firm-year observations from 1999 – 2001 period. They find that there is no difference for accrual earnings management between

IFRS-adopter firms and firms that follow German GAAP. This result shows that IFRS might not increase earnings quality. This result is in line with Bryce et al. (2015) using Australian sample. They compared absolute discretionary accrual before and after IFRS adoption. The result is not significant. Further, they use multivariate analysis to examine the effect of IFRS adoption on earnings management. The result is also consistent. This suggests that earnings quality does not increase after IFRS adoption. Ahmed et al. (2013) also find similar result using meta-analysis. IFRS have no significant effect to reduce discretionary accruals.

Callao et al. (2007) investigate the effect of IFRS adoption on the comparability and relevance of financial statements using Spain companies as their sample. The result of their research shows that local comparability of financial statements in Spain become worse and there is no increase in the relevance of financial statements. This result shows that IFRS have adverse effect on comparability and have no significant effect on relevancy. Further, Gastón et al. (2010) compare the effect of IFRS adoption on the first adopters between the UK and Spain. The result of their research reported a significant quantitative impact for both countries. Spain shows a higher quantitative impact as compared to the UK. This result is against the expectation that the UK would have higher quantitative effect. Further, Gastón et al. (2010) find that IFRS have inverse effect on relevance in Spain, but it has no significant effect in the UK. This result shows that IFRS have negative effect on relevance. This result is supported by Kabir et al. (2010) using New Zealand sample. The absolute value of discretionary accruals increases in the periods of IFRS adoption compare to before the adoption.

There is evidence of increase in earnings management after the adoption of IFRS using cross countries studies (Callao & Jarne, 2010; Jeanjean & Stolowy, 2008). Callao and Jarne (2010) investigate the impact of IFRS adoption on earnings management using the EU sample and find that discretionary accruals in the EU are higher after the adoption. This suggests that managers use their discretions to manage earnings. IFRS provide more flexibility for managers to use their judgment. Thus, IFRS provide more opportunities for managers to use their discretionary. Jeanjean and Stolowy (2008) provide evidence that earnings management do not decline in the UK and Australia. IFRS might not reduce the level of earnings management compare to period before the adoption. However, the level of earnings management in France increases after the adoption of IFRS. This result is similar to Ahmed et al. (2013) who conducted a study for 20 countries. There is an increase in income smoothing and aggressive discretionary accrual after the adoption of IFRS. IFRS might not increase earnings quality, it provides higher opportunity for managers to use their discretions. Thus, the level of earnings management after the IFRS adoption has increased.

On the other hand, there is evidence that earnings management decreases after the IFRS adoption (Chen et al., 2010; Houqe et al., 2012; Ismail et al., 2013; Pelucio-Grecco et al., 2014). Chen et al. (2010) investigate the effect of IFRS adoption on earnings quality in the 15 EU countries. They find that earnings quality increases after the adoption. There is evidence of less earnings management, higher quality of discretionary accruals and lower magnitude of discretionary accruals. Thus, IFRS provides positive effect on earnings quality within EU countries. This result is supported by Houqe et al. (2012) using cross country analysis throughout 46 countries in the world. They find that earnings quality increases after the adoption in those countries with strong protection to investors. However, further research by Houqe et al. (2014) also find that earnings quality increases in the countries with low investor protection. Collectively, these studies provide evidence that IFRS might increase earnings quality.

Dimitropoulos et al. (2013) observe the effect of IFRS adoption using Greece companies. The result of their research shows that earnings management is reduced with more timely loss recognition and greater relevancy after the adoption of IFRS. Thus, IFRS provide better earnings quality to investors. This result is in line with Ismail et al. (2013) using Malaysian sample. The level of earnings management has decreased during the period after the adoption of IFRS. Pelucio-Grecco et al. (2014) examined the effect of IFRS adoption on earnings management using non-financial firms in Brazil. They find that IFRS have restrictive effect on earnings management in Brazil. This result shows that IFRS have a negative effect on earnings management. Zeghal et al. (2012) also provide evidence that the level of earnings management in France declines after the adoption of IFRS.

Liu, Yao, Hu, and Liu (2011) investigate the effect of IFRS adoption on earnings management in China. In 2007, IFRS-convergence standards become mandatory. Thus, Liu et al. (2011) observe 2005 – 2008 period. They find that the level of earnings quality in China has improved. The level of earnings management in China has decreased and the level of value relevance has increased. Thus, IFRS in China might have a positive effect on earnings quality.
Based on the previous literature that IFRS adoption have a positive effect on earnings quality, therefore it is expected that the adoption of IFRS have a negative effect on earnings management.

2.2. IFRS and Real Earnings Management

Managers have two options on managing earnings: accrual and real activity. Graham et al. (2005) find that managers switch to real activity to manage earnings during tight monitoring from regulators. Recent research on the effect of IFRS on earnings management also consider both earnings management methods (Doukakis, 2014; Ferentinou & Anagnostopoulou, 2016; Ho et al., 2015). Doukakis (2014) investigate the effect of mandatory adoption of IFRS on both accrual and real earnings management. The sample of his research consists of 15,206 observations during 2002 – 2010 periods from 22 European countries. They find that the levels of both accrual and real earnings management is not significantly different between before and after the adoption. Thus, IFRS might not have significant effect on earnings management.

Ferentinou and Anagnostopoulou (2016) examine the effect of IFRS adoption on both accrual and real earnings management in Greece. They find that accrual earnings management decreases after the IFRS adoption. Thus, IFRS reduce accrual earnings management practice in Greece. However, as pointed out by Graham et al. (2005), managers prefer to engage in real earnings management if the monitoring for accrual activity is tight. Ferentinou and Anagnostopoulou (2016) find that real earnings management has increased after the adoption of IFRS. There are significant increase in real earnings management: cash flows from operation, discretionary expenses and production costs. Thus, managers shift from accrual activity to real activity after the adoption of IFRS. This result is supported by Ho et al. (2015) and Lyu, Yuen, Zhang, and Zhang (2014). There is evidence that managers in China switch to real activity after the IFRS periods. Accrual earnings management decreases, but there is increase of real earnings management after the IFRS adoption. Liu, Yip, Yao, and Siew (2014) also find that firms increasingly manage earnings through R&D activity at the periods after IFRS adoption in Germany.

A cross-country study on the effect of IFRS on real earnings management shows that firms switch to real earnings activity to manage earnings (Ipino & Parbonetti, 2017). Real earnings management increases in the periods after IFRS adoption. However, further test shows that this effect significant in European countries only. IFRS adoption in the non-European countries has no significant effect on real earnings management. Similar study on the cross country setting in Asia conducted by Wardhani and Anggraenni (2017) also confirms Ipino and Parbonetti (2017) result. There is an increase in real earnings management after the adoption of IFRS in Asia. Companies in Asia prefer to apply real activity to manage earnings compared to accrual earnings management.

Ferentinou and Anagnostopoulou (2016), Ho et al. (2015), Ipino and Parbonetti (2017), Liu et al. (2014) and Lyu et al. (2014), Wardhani and Anggraenni (2017) provide evidence that IFRS adoption have significant effect on real activity. Therefore, it is expected that IFRS adoption in Indonesia have significant effect on real earnings management.

2.3. Independent Commissioners, IFRS and Earnings Management

Board of commissioners (BoCs) is a company element that has duties to supervise and to give advice to board of directors. The BoCs is an important element in corporation because they have the responsibility to make sure that board of directors is doing their work well and conducting good corporate governance. As the supervisory board, this board has to monitor the board of directors. Since they are formally separated from the board of directors, therefore it might be argued they can monitor more independently. Unlike in the one-tier board systems, there should be no conflict of interests between management and monitoring in two-tier board systems. Therefore, BoCs is a seminal element on the corporate governance practice in Indonesia (Kamal, 2009). BoCs itself consists of independent commissioners, affiliated commissioners, and inside commissioners. Independent commissioners, in particular, are assigned with the duties to protect shareholders interests. Although BoCs is separated from board of directors, however there is doubt on the monitoring function of board of commissioners (Kamal, 2009; Tabalujan, 2002). Studies on the effectiveness of independent commissioners in Indonesia were conducted by Prabowo and Simpson (2011) and Siregar and Utama (2008). Prabowo and Simpson (2011) find no significant effect of independent commissioners on firm performance. Thus, independent commissioners do not provide positive effect on firm value. Further, Siregar and Utama (2008) also find that independent commissioners have no significant effect on earnings management. These studies show that independent commissioners in Indonesia might not work well to fulfill their role. It might be because of lack of institution reform on independent commissioners (Prabowo & Simpson, 2011). On the other hand, Siagian and Tresnaningsih (2011) provide evidence that independent commissioners in Indonesia have a negative effect on earnings management. Thus, independent commissioners in Indonesia mitigate earnings management.

Jensen and Meckling (1976) argue that firm is a nexus of contract. There is a contract between principal and agents. Both parties have incentive to fulfill self-interest. Agents have more information regarding firm condition compare to principal. There is information asymmetry between both parties. However, it needs an effective corporate governance to reduce information asymmetry. One important element to corporate governance function is independent directors. Independent directors are not related to both owners and management. Therefore, it is expected that independent directors are able to make independent decision. Fama and Jensen (1983) argue that independent directors have incentive to build his/her reputation. Independent directors need to build his/her reputation through his performance as a director. Independent directors with better performance have better reputations. It is a signal to the market that he is an expert in the decision process. A study by Fich and Shivdasani (2007) show that directors have responsibilities to minimize fraud. Directors who hold a position in the board of directors of the company that face class action lawsuit experience significant decline in number of outside position. This result shows that a loss in directors reputation have a negative effect on their job market opportunities. Independent directors have incentives to maintain his reputation through better financial statement quality. Independent directors are expected to minimize earnings management. Previous studies such as as Klein (2002), Peasnell et al. (2005), Reitenga and Tearney (2003), Wu et al. (2016) also provide evidence that independent directors have negative effect on earnings management.

On December 8, 2008, the Indonesian Institute of Chartered Accountant made a public commitment about the decision to adopt International Financial Reporting Standard (IFRS) as the Indonesian Accounting Standards. Indonesia applied gradual convergence of IFRS. The first phase of convergence started from 2009 until 2012. In the first phase of IFRS convergence, there were 3 years lag between IFRS standard and the adoption. The second phase of convergence started from 2012 until 2015. In this second phase of convergence, there was one year lag between IFRS standard and the adoption. In this case, it is also expected that independent commissioners mitigate earnings management during the adoption of IFRS.

Elshandidy and Hassanein (2014) examine the role of independent directors on the accounting conservatism during IFRS adoption in the UK. The result of their research shows that independent directors put higher pressure on management to practice more accounting conservatism. In this study, independent directors provide positive effect on accounting conservatism. Further, Marra et al. (2011) investigate the effect of independent commissioners on earnings management after the IFRS adoption in Italy. There is evidence that independent directors in Italy provide effective monitoring. Independent directors have negative effect on earnings management. Thus, independent directors mitigate earnings management in the periods after IFRS adoption. This result also shows that corporate governance practice have significant effect on earnings management.
Based on the literature review on the role of independent commissioners to mitigate earnings management, this study expect that independent commissioners in Indonesia have negative effect on earnings management. It is expected that independent commissioners mitigate earnings management.

3. RESEARCH METHODS

3.1. Data

The sample of this study consists of non-financial companies in the Indonesia Stock Exchange (IDX) over the period of 2007 - 2010. This study excludes financial firms as they have different characteristics. The final sample consists of 1,127 firm-year observations.

The dependent variable is earnings management. This study examines both earnings management: accruals and real earnings management. The study uses Modified Jones (Dechow, Sloan, & Sweeney, 1995) to measure accrual earnings management. Further, the study also follow Jones (1991) model as robustness test. The authors follow Roychowdurry (2006) models to measure real earnings management. There are three measurement of real earnings management: cash flows from operation, production costs and discretionary expenses. The main determinant variable is the adoption of IFRS. There are two periods: pre and post IFRS adoption. Pre-IFRS adoption covers 2007 and 2008 and post IFRS adoption covers 2009 and 2010. The IFRS adoption is proxy by a dummy variable, 1 if post IFRS adoption and 0 otherwise. The second independent variable is independent commissioners. The percentage of independent commissioners to board of commissioners is used as a proxy of independent commissioners.

The study takes into account a number of control variables including growth, firm size, institutional ownership and auditor size. Growth is measured by the market value to the book value of equity (Setiawan, Bandi, Phua, & Trinugroho, 2016). Lee, Li, and Yue (2006) argue that growth is an important aspect in earnings management study. Higher growth firm have more opportunities to expand. Therefore, companies have incentives to maintain their growth through earnings management activity. There is a positive relationship between growth and earnings management (Kim & Sohn, 2013). Auditor size is a dummy variable, 1 if the audit firm is Big-4 and 0 otherwise. Audit is an important mechanism to reduce agency cost because it provides an independent opinion about the credibility of financial statements. Previous studies show that audit firms have significant effect on earnings management (Farrell, Unlu, & Yu, 2014; Rusmin, 2010). Firm size is measured as the natural logarithm of total assets. Based on political cost hypothesis, bigger firms attract more attention from the regulator and shareholders, therefore bigger firms tend to manage earnings to minimize political cost (Watts & Zimmerman, 1978). Institutional ownership is measured as percentage of institutional share ownership. Institutional owner have incentives to monitor the company. Therefore, institutional ownership play an active role to minimize earnings management. Previous studies such as García-Meca and Sánchez-Ballesta (2009) and Sarkar, Sarkar, and Sen (2008) provide evidence of a negative relationship between institutional ownership and earnings management.

3.2. Hypothesis Testing

To test the hypothesis, we estimate the empirical model presented as follows:

$$EM_{it} = \alpha + \beta_1 IFRS + \beta_2 IC + \beta_3 IFRS*IC + \beta_4 FS_{it} + \beta_5 AS_{it} + \beta_6 Growth_{it} + \beta_7 IO_{it} + e_{it} \quad (1)$$

Where:

EM_{it} = Earnings management, accrual earnings management (modified Jones models) and real earnings management: cash flows from operation, production costs and discretionary costs
IFRS = IFRS adoption, dummy variable, 1 if post adoption period (2009 and 2010) and 0 if pre adoption (2007 and 2008).
IC_{it} = Independent commissioners, percentage of independent commissioners in the board of commissioners
FS = firm size, natural logarithm of total assets

AS = auditor size, dummy variable 1 if audit firm is Big-4 and 0 otherwise
Growth = market to book value of equity
IO = institutional ownership, percentage of institutional share ownership

4. ANALYSIS

4.1. Descriptive Statistics

Table 1 panel A and B provide descriptive statistics of variables. The average of accrual earnings management using Jones model is 0.070. The median of accrual earnings management is 0.046. This descriptive data is in line with accrual earnings management using modified Jones (Dechow et al., 1995) with a mean and median of 0.128 and 0.095, respectively. This result shows that most of the companies in this study engage in income increasing earnings management. Firms engage in earnings management to increase earnings. However, real earnings management for all the three measurements are negative. The mean values for real earnings management: production costs, discretionary expenses and cash flows from operations are -0.066, -0.229 and -0.127, respectively. The median for real earnings management production costs, discretionary expenses and cash flow from operations are also negative, i.e. -0.021, -0.171 and -0.084 respectively. These descriptive analysis shows that companies engage in income increasing real earnings management.

Table 1: Descriptive Statistics

Panel A. Continuous Variable

	Mean	**Median**	**Maximum**	**Minimum**	**Std. Dev.**
Jones	0.070	0.046	24.672	-17.845	1.182
ModJones	0.128	0.095	25.023	-17.921	1.163
REM_PC	-0.066	-0.021	1.310	-3.416	0.307
REM_DE	-0.229	-0.171	3.480	-4.718	0.416
REM_CF	-0.127	-0.084	8.252	-6.070	0.593
IC	36.968	33.330	100.000	0.000	14.179
IO	11.618	0.000	92.660	0.000	19.457
G	2.406	1.028	157.947	-24.540	7.660
L_FS	13.798	13.833	19.657	6.340	1.775

Jones = accrual earnings management using Jones (1991) models, ModJones = accrual earnings management using modified Jones models (Dechow et al., 1995), REM_PC = real earnings management production costs, REM_DE = real earnings management discretionary expenses, REM_CF = real earnings management cash flow from operations, IC = independent commissioners, percentage of independent commissioners in the board of commissioners, IO = institutional ownerships, percentage of institutional ownership, L_FS = firm size, natural logarithm of total assets, Gr = growth, market to book value of equity

Panel B. Dichotomous Variable

	Frequency of 1	Frequency of 0
AS	0.37	0.63

AS = auditor size, dummy variable 1 if audit firm is big-4 and 0 otherwise

Table 1, Panel A also shows that the mean of independent commissioners is 36.968%, with a median of 33.33%. This data show that four out of ten commissioners in Indonesia are independent. The regulation regarding independent commissioners in Indonesia required that at least one third of commissioners to be independent members. Thus, independent commissioners in this study fulfill this requirement. Mean of institutional ownership is 11.618% and mean of growth is 2.406. Table 1 Panel B shows that most of companies are audited by non big-4.

In Table 2, it is exhibited that the correlation between IFRS and accrual earnings management is not significant. IFRS have significant correlation with real earnings management cash flows from operations, however IFRS have no significant correlation with real earnings management: production costs and discretionary expenses. Independent commissioners have a positive significant correlation with real earnings management production costs. However, independent commissioners have no significant correlation with accrual earnings management, discretionary expenses and cash flows from operations. Further, the Table 2 shows that accrual earnings management has a negative correlation with real earnings management: production costs and cash flows from operations. However, accrual earnings management has a positive correlation with real earnings management discretionary expenses. Thus, accrual earnings management has a significant correlation with real earnings management.

Table 2: Correlation

	Jones	REM_PC	REM_DE	REM_CF	IFRS	IC	AS	IO	Gr	L_FS
REM_PC	-0.2511***	1								
	(-8.6482)									
REM_DE	0.2556***	-0.2731***	1							
	(8.8106)	(-9.4629)								
REM_CF	-0.2565***	-0.1315***	-0.1938***	1						
	(-8.8452)	(-4.4199)	(-6.5854)							
IFRS	-0.0115	0.0362	-0.0433	0.0535*	1					
	(-0.3833)	(1.2065)	(-1.4444)	(1.7854)						
IC	-0.0444	0.0881***	-0.0315	0.0222	0.0263	1				
	(-1.4815)	(2.9494)	(-1.0506)	(0.7414)	(0.8776)					
AS	-0.0432	-0.1457***	-0.0588**	-0.0004	-0.0233	-0.0096	1			
	(-1.4409)	(-4.9082)	(-1.9636)	(-0.0119)	(-0.7772)	(-0.3216)				
IO	-0.0175	0.0899***	-0.1159***	-0.0053	0.0036	0.0651**	-0.1192***	1		
	(-0.5823)	(3.0081)	(-3.8905)	(-0.1775)	(0.1187)	(2.1750)	(-4.0012)			
Gr	0.0351	-0.1600***	0.0232	0.1352***	-0.0207	0.0396	0.0157	0.0411	1	
	(1.1703)	(-5.4044)	(0.7727)	(4.5498)	(-0.6899)	(1.3200)	(0.5229)	(1.3704)		
L_FS	0.0228	-0.1257***	0.0156	0.0108	0.0493	0.0683**	0.3416***	-0.1937***	-0.0510*	1
	(0.7598)	(-4.2232)	(0.5211)	(0.3585)	(1.6460)	(2.2830)	(12.1138)	(-6.5793)	(-1.7036)	

Jones = accrual earnings management using Jones (1991) models, ModJones = accrual earnings management using modified Jones models (Dechow et al., 1995), REM_PC = real earnings management production costs, REM_DE = real earnings management discretionary expenses, REM_CF = real earnings management cash flow from operations, IC = independent commissioners, percentage of independent commissioners in the board of commissioners, AS= auditor size, dummy variable 1 if audit firm is big-4 and 0 otherwise, IO = institutional ownerships, percentage of institutional ownership, L_FS = firm size, natural logarithm of total assets, Gr = growth, market to book value of equity

4.2. Hypothesis Testing

Table 3 below provides information regarding the result of hypothesis testing on the effect of IFRS adoption and independent commissioners on accrual earnings management.

Table 3

The Effect of IFRS adoption and Independent Commissioners on Accrual Earnings Management

Model (Column)	**Jones (1)**	**Jones (2)**	**Jones (3)**	**ModJones (4)**	**ModJones (5)**	**ModJones (6)**
C	-3.9873***	-3.0283***	-3.0410***	2.3803***	3.3309***	2.6146***
	(-10.2635)	(-7.1493)	(-7.4058)	(5.7745)	(7.9195)	(6.1008)
IFRS	-0.0424***	-0.0263***	-0.1824***	-0.0523***	-0.0519****	-0.1100***
	(-6.3996)	(-3.4198)	(-4.8256)	(-4.8501)	(-4.4562)	(-2.9236)
IC		0.0014*	-0.0032***		-0.0053***	-0.0071***
		(1.7230)	(-2.8599)		(-4.0169)	(-4.9670)
IFRS_IC			0.0049***			0.0016*
			(5.3485)			(1.8674)
AS	-0.0408	-0.0568	-0.0274	-0.2809***	-0.3567***	-0.3284***
	(-0.6434)	(-0.9521)	(-0.5112)	(-5.6048)	(-7.2331)	(-5.5441)
IO	-0.0033***	-0.0031***	-0.0026**	0.0038***	0.0027*	0.0025*
	(-3.2619)	(-3.0825)	(-2.4583)	(2.7718)	(1.7248)	(1.6420)
Gr	-0.0004	-0.0007	-0.0007	-0.0021	0.0022	0.0027
	(-0.1996)	(-0.3235)	(-0.3228)	(-0.9411)	(1.1342)	(1.4936)
L_FS	0.3003***	0.2267***	0.2376***	-0.1616***	-0.2141***	-0.1581***
	(10.7408)	(7.3597)	(7.9252)	(-5.4385)	(-7.1051)	(-5.1332)
F-Stat	3.8173***	3.1349***	4.3588***	2.4354***	2.4788***	2.6556***
Adj R2	0.4205	0.3556	0.4655	0.2692	0.2758	0.2996

Jones = accrual earnings management using Jones (1991) models, ModJones = accrual earnings management using modified Jones models (Dechow et al., 1995), IC = independent commissioners, percentage of independent commissioners in the board of commissioners, AS = auditor size, dummy variable 1 if audit firm is big-4 and 0 otherwise, IO = institutional ownerships, percentage of institutional ownership, L_FS = firm size, natural logarithm of total assets, Gr = growth, market to book value of equity

***, **,* significant at 1%, 5%, 10% respectively

Table 3 exhibited the effect of IFRS adoption on accrual earnings management using Jones models. There is a negative effect of IFRS adoption on accrual earnings management. This result shows that IFRS adoption leads to lower accrual earnings management. IFRS adoption mitigates accrual earnings management. This result confirms the expectation that IFRS lead to lower earnings management. Thus, IFRS provide better earnings quality. This study supports Brown (2011) argument on the benefit of IFRS. This result supports the previous research such as Houqe et al.

(2014), Houqe et al. (2012), Ismail et al. (2013) and Pelucio-Grecco et al. (2014) who find a negative effect of IFRS on earnings management. The result of negative effect of IFRS adoption on accrual earnings management is consistent using different methods on accrual earnings management measurement. There is a negative effect of IFRS adoption on accrual earnings management using Jones (1991) as well as modified Jones model (Dechow et al., 1995).

Table 3 also provides evidence that independent commissioners have a negative effect on accrual earnings management. Independent commissioners are able to mitigate earnings management. Thus, independent commissioners in Indonesia provide effective monitoring of accrual earnings management by limiting accrual activities of management. Thus, earnings management has decreased. This result supports the expectation that independent commissioners provide effective monitoring to mitigate accrual earnings management. The study confirms previous studies such as Elshandidy and Hassanein (2014) and Marra et al. (2011) who find that independent directors have mitigated earnings management.

The interaction between IFRS and independent commissioners has a significant effect on accrual earnings management. There is a positive effect on the interaction between IFRS adoption and independent commissioners. This result shows different signs in terms of the effect both IFRS and independent commissioners on accrual earnings management. The individual effect of IFRS adoption and independent commissioners is negative no the accrual earnings management. However, the interaction between both variables has a positive effect on accrual earnings management. Therefore, it might suggest that the independent commissioners is less effective in the periods after the IFRS adoption. The role of independent commissioners in the periods after IFRS adoption is not as strong as the period pre-IFRS adoption. This result does not confirm the expectation that independent commissioners become more effective to monitor the management. Thus, the study does not support Marra et al. (2011) result that independent directors become more effectively in monitoring earnings management after IFRS adoption within the Italy context.

Table 3 shows that the control variables have significant effect on accrual earnings management using Jones (1991) model. Institutional ownership has a negative effect on accrual earnings management. Thus, institutional ownership plays a monitoring function. It mitigates accrual earnings management. On the other hand, firm size has a positive effect on accrual earnings management. Bigger firms tend to engage in income increasing accrual earnings management. The present study finds that growth and auditor size have no significant effect on accrual earnings management. However, the effect of control variables on accrual earnings management using modified Jones model (Dechow et al., 1995) is different from Jones (1991). Column 3, 4, 6 in Table 3 shows that auditor size and firm size have a negative effect on accrual earnings management using modified Jones models (Dechow et al., 1995). Big-4 audit firm mitigated accrual earnings management using modified Jones models (Dechow et al., 1995). Bigger firms tend to lower accrual earnings management using modified Jones models (Dechow et al., 1995). On the other hand, institutional ownership has a positive effect on accrual earnings management using modified Jones models (Dechow et al., 1995). Institutional ownership tends to push management to engage in income increasing accrual earnings management. Growth have no signficant effect on accrual earnings management using modified Jones models (Dechow et al., 1995). Table 3 shows that the effects of control variables on accrual earnings management are depending on the accrual earnings

models. However, the main effect of IFRS and independent commissioners are robust on the accrual earnings management models.
Table 4 below provides information regarding the result of hypothesis testing on the effect of IFRS adoption and independent commissioners on real earnings management.

Table 4 exhibited the effect of IFRS adoption and independent commissioners on real earnings management production costs. IFRS have a positive effect on production costs. Real earnings management production costs in the periods after IFRS has increased as compared to periods before IFRS adoption. IFRS provide opportunity for managers to engage in real earnings management production costs to manage earnings. In this case, IFRS have provide flexibility for managers to manage production costs. It might say that companies use real activity on production costs to achieve earnings target.

Independent commissioners have a negative effect on real earnings management production costs. Independent commissioners have mitigate companies to engage in real activity earnings management on production costs. This result shows that independent commissioners effectively monitoring production activities. Independent commissioners act as one of the important corporate governance mechanism to mitigate real earnings management. This result is in line with Kang and Kim (2012) who find that outside directors in Korea effectively reduce real earnings management production costs. The interaction between IFRS and independent commissioners has a negative effect on real earnings management production costs. The independent commissioners have effectively reduced real earnings management in the periods after the IFRS adoption. The real earnings management in the periods after IFRS adoption is less than before the IFRS adoption.

Table 4 also shows that IFRS have a negative effect on real earnings management discretionary expenses. IFRS have mitigated real earnings management discretionary expenses. Discretionary expenses after IFRS adoption have decreased compared to before IFRS adoption. This result shows that IFRS might reduce the level of discretionary expenses. This confirms the expectation of the benefit of the IFRS adoption (Brown, 2011). It is expected that the quality of earnings will increase after the IFRS adoption. Table 4 shows that level of real earnings management discretionary expenses have been reduced in the period after the IFRS adoption.

Table 4 exhibited the positive effect of independent commissioners on real earnings management discretionary expenses. Independent commissioners exacerbate management to engage in real earnings management discretionary expenses. Independent commissioners might not effectively monitor discretionary expenses, because they have positive effect on discretionary expenses. However, the hypothesis testing at column 6 shows that independent commissioners have no positive effect on real earnings management discretionary expenses. Therefore, independent commissioners might not mitigate real earnings management discretionary expenses. This result confirms Kang and Kim (2012) who find that outside directors in Korea might not have significant influence on real earnings management discretionary expenses.

Table 4: The Effect of IFRS adoption and Independent Commissioners on Real Earnings Management

	REM_PC	REM_PC	REM_PC	REM_DE	REM_DE	REM_DE	REM_CF	REM_CF	REM_CF
c	2.2335***	2.2973***	2.1585***	-2.3693***	-2.2441***	-2.0920***	2.0681***	2.0507***	2.0142***
	(11.6798)	(12.0035)	(10.4520)	(-21.2063)	(-15.8992)	(-14.3613)	(6.4403)	(6.2844)	(6.1500)
IFRS	0.0026	0.0090**	0.0533***	-0.0252***	-0.0227***	-0.0566***	0.0811***	0.0821***	0.0766***
	(0.6543)	(2.1212)	(3.6554)	(-7.2741)	(-6.0352)	(-4.0698)	(8.8105)	(8.9300)	(3.4167)
IC		-0.0027***	-0.0024***		0.0013***	0.0003		0.0006	0.0004
		(-4.4242)	(-3.8891)		(4.0653)	(0.7930)		(0.9224)	(0.5567)
IFRS_IC			-0.0011***			0.0009***			0.0001
			(-2.9097)			(2.5783)			(0.1375)
AS	-0.0991***	-0.1111***	-0.0971***	-0.0604***	-0.0426***	-0.0534***	-0.0146	-0.0150	-0.0181
	(-3.7002)	(-3.9000)	(-3.2580)	(-4.7153)	(-2.8008)	(-3.5976)	(-0.3352)	(-0.3292)	(-0.4077)
IO	0.0035***	0.0035***	0.0028***	-0.0015***	-0.0014***	-0.0011***	-0.0045***	-0.0046***	-0.0046***
	(7.8986)	(8.1670)	(4.9289)	(-3.3034)	(-2.8644)	(-2.3224)	(-3.7834)	(-3.8436)	(-3.8971)
Gr	0.0014	0.0007	0.0011	-0.0043***	-0.0051***	-0.0052***	0.0040*	0.0040*	0.0040*
	(1.3161)	(0.7279)	(1.3113)	(-4.3237)	(-4.8835)	(-4.9992)	(1.9259)	(1.9340)	(1.9173)
L_FS	-0.1698***	-0.1670***	-0.1576***	0.1610***	0.1480***	0.1396***	-0.1568***	-0.1572***	-0.1538***
	(-12.0177)	(-11.9298)	(-10.4557)	(19.2591)	(14.0900)	(13.0525)	(-6.6893)	(-6.6826)	(-6.5090)
F-Stat	17.6990***	19.8297***	20.1102***	16.6930***	16.0476***	14.5191***	14.4540***	15.1203***	14.3397***
Adj R2	0.8111	0.8293	0.8318	0.8025	0.7963	0.7790	0.7760	0.7849	0.7758

REM_PC = real earnings management production costs, REM_DE = real earnings management discretionary expenses. REM_CF = real earnings management cash flows, IFRS = dummy variable 1 if 2009 and 2010 otherwise 0, IC = percentage of independent commissioners, AS = auditor firm size, dummy variable 1 if audited by Big-4 and 0 otherwise, IO = institutional ownership shares. G = growth is ratio of market to book of equity. FS = firm size in million Rupiahs. Number in the bracket is t-statistics.
***, **,* significant at 1%, 5%, 10% respectively

The interaction between IFRS and independent commissioners has a positive effect on real earnings management discretionary expenses. Since independent commissioners have no significant effect on real earnings management discretionary expenses, thus, they do not mitigate real earnings management discretionary expenses in the period after IFRS adoption. The level of discretionary expenses has increased after the IFRS adoption. Thus, IFRS provide flexibility for management to engage in discretionary expenses. This result supports the effect of the interaction between IFRS and independent commissioners on accrual earnings management.

Table 4 shows that IFRS have a positive effect on real earnings management in cash flows from operation. IFRS adoption might not mitigate real earnings management cash flows from operations, but it exacerbates it. Management engages more in cash flows from operation after the adoption of IFRS. This result shows that management use real activity on cash flows from operation to engage in earnings management. IFRS push management to engage in real activity to achieve earnings target.

Independent commissioners have no significant effect on real earnings management in cash flows from operations. Independent commissioners might not monitor tightly on the cash flows for operations activity. Therefore, independent commissioners have no impact on the real activity of cash flows from operations. This result fails to provide further evidence to support Kang and Kim (2012) who find that outside directors have a positive effect on cash flows from operation. Further, the interaction between IFRS and independent commissioners have no significant effect on real activity of cash flow from operations. There is no difference between the effect of independent commissioners on cash flows from operations before and after the IFRS adoption.

Table 4 also shows the effect of control variables on real earnings management. Auditor size has a negative effect on real earnings management: production costs and discretionary expenses. Big-4 audit firm have mitigated real earnings management production costs and discretionary expenses. However, big-4 audit firms have no significant effect on cash flows from operations. Institutional ownership has a positive effect on real earnings management production costs. Institutional ownership tends to push managers to engage in real earnings management using production activity. On the other hand, institutional ownership has a negative effect on discretionary expenses and cash flows from operations. Institutional ownership mitigates managers to engage in real earnings management through discretionary expenses and cash flows from operations. Growth has no significant effect on production costs, but it has a significant effect on both discretionary expenses and cash flows from operations. Firm size has a negative effect on real earnings management production costs and cash flows from operations. Bigger firms tend to reduce real earnings management production costs and cash flows from operations. However, firm size has a positive effect on discretionary expenses.

5. DISCUSSIONS

This study investigates the effect of IFRS adoption on both accrual and real earnings management. The result of the study shows that IFRS have a negative effect on accrual earnings management. This result is robust on accrual earnings management using Jones (1991) and modified Jones (Dechow et al., 1995). This result shows that IFRS mitigate accrual earnings management. Accrual earnings management in the periods after the IFRS adoption is lower compare to before the IFRS adoption. This result supports the expectation that IFRS provide more accurate information (Ball, 2006) and increase firm earnings quality (Brown, 2011).

This result provides further evidence to support previous studies such as Dimitropoulos et al. (2013), Houqe et al. (2014), Houqe et al. (2012), Ismail et al. (2013), Liu et al. (2011), Pelucio-Grecco et al. (2014) and Zeghal et al. (2012) who find that IFRS adoption reduces accrual earnings management. However, this study is not in line with Bryce et al. (2015) and Ahmed et al. (2013) Van Tendeloo and Vanstraelen (2005) who find no significant effect of IFRS on accrual earnings management; and Ahmed et al. (2013), Callao and Jarne (2010), Jeanjean and Stolowy (2008) and Kabir et al. (2010) who find accrual earnings management increases after the IFRS adoption. Following Ball (2006), Brown (2011) and Soderstrom and Sun (2007) who argued that the effectiveness of IFRS adoption is depending on institutional contexts, this study shows that the adoption of IFRS provides a positive effect on earnings quality in a country with weak investor protection (La Porta et al., 1998) and weak law enforcement (Tabalujan, 2002) such as Indonesia.

Most of studies on the effect of IFRS on earnings management focus on accrual earnings management, except Doukakis (2014), Ferentinou and Anagnostopoulou (2016), Ho et al. (2015) who investigate the effect of IFRS on both accrual and real earnings management. However, Doukakis (2014), Ferentinou and Anagnostopoulou (2016), Ho et al. (2015) analyze real earnings management as one single measurement. As pointed out by Cohen and Zarowin (2010) and Roychowdhury (2006), analyzing real earnings management as a single measurement leads to double counting or offsetting one measurement with another measurement, thus it is more appropriate to analyze each real activity component separately as suggested by Roychowdhury (2006): production costs, discretionary expenses and cash flows from operations. This study provides the effect of IFRS adoption on real earnings management of production costs, discretionary expenses and cash flows from operations.

Previous studies provide inconclusive results, Doukakis (2014) find there is no difference of real earnings management between before and after IFRS adoption. However, Ferentinou and Anagnostopoulou (2016) and Ho et al. (2015) find real earnings management increases after the IFRS adoption. Both Ferentinou and Anagnostopoulou (2016) and Ho et al. (2015) find that the level of accrual earnings management decreases but the level of real earnings management has increased. Managers tend to switch to real earnings management after IFRS adoption. The results of this study provide evidence that managers engage in real earnings management. There is a significant effect of IFRS adoption on real earnings management: production costs, discretionary expenses and cash flows from operations. There are increase in real earnings management: production costs and cash flow from operations. Managers engage in both production costs and cash flows from operations to increase firms' earnings. However, there is a negative effect of IFRS adoption on discretionary expenses. The discretionary expenses decrease after the IFRS adoption.

The result of the study provides evidence that managers engage in real earnings management production costs and cash flows from operation to manage earnings. However, managers do not rely on discretionary expenses to manage earnings. This is a contribution of the present study. Managers use their discretion on production costs and cash flows from operation after the IFRS adoption to engage in earnings management. This study confirms Ferentinou and Anagnostopoulou

(2016) and Ho et al. (2015) that managers switch to real earnings management after the IFRS adoption. These results also confirm the argument of Graham et al. (2005) that managers prefer to engage in real activities if the monitoring for accrual activities is tight.

Further, this study shows that independent commissioners in Indonesia effectively monitor accrual activities. There is a negative effect of independent commissioners on accrual earnings management. This study confirms the expectation that independent commissioners are one of the important corporate governance mechanisms to monitor the managers. This result supports Siagian and Tresnaningsih (2011) that independent commissioners in Indonesia mitigate accrual earnings management. Independent commissioners also have a negative effect on real earnings management of production costs. Independent commissioners also well monitor the production activities to reduce real earnings management. This result is in line with Kang and Kim (2012) who find that independent directors mitigate production costs. However, independent commissioners might not mitigate real earnings management of discretionary expenses and cash flows from operations. Thus, independent commissioners in Indonesia have mitigated accrual earnings management and production costs.

This study provides evidence that the effectiveness of independent commissioners to monitor accrual activity is less effective in the periods after IFRS adoption. The interaction between IFRS and independent commissioners has a positive effect on accrual earnings management. This result shows that the monitoring activity of independent commissioners in the periods after the IFRS adoption might not as closely as the periods before IFRS adoption. This result fails to support Marra et al. (2011) who find independent directors become more effective after IFRS adoption. Further, this study provides evidence that independent commissioners become more effective to monitor production costs. Independent commissioners monitor closely production activity in the periods after the IFRS adoption. Managers switch to real earnings management after the IFRS adoption. Thus, independent commissioners monitor closely the production activities. However, independent commissioners might not monitor effectively on real earnings management discretionary expenses and cash flows from operations.

The results of the study show that discretionary expenses decrease after IFRS adoption. On the other hand, production cost increased after the IFRS adoption. This study finds that companies actively use production activity to manage earnings and companies rely on overproduction to achieve earnings target. There are two important effects of overproduction. First it will provide more products to meet customer demand and second, it will decrease the cost of good sold (Roychowdhury, 2006). As an example, PT Pupuk Indonesia face difficulties to achieve its earnings target in 2016 because the price of fertilizer in the market declined. Hence, the management planned to produce more poducts to achieve its earnings target. This indicated that PT Pupuk Indonesia decided to use real activity to manage earnings. Therefore, independent commissioners give more attention to monitoring production activity.

6. CONCLUSION

This study investigates the effect of IFRS adoption on earnings management in the Indonesian context. The result shows that IFRS have mitigated accrual earnings management. However, managers choose to switch to real activities to manage earnings. Real earnings management production costs and cash flow from operations have increased after the IFRS adoption, although real earnings management of discretionary expenses decreased after the IFRS adoption. Therefore, managers prefer to manage production costs and cash flows from operations to manage earnings.

The independent commissioners provide evidence that they effectively monitor accrual earnings management and real earnings management of production costs. There is a negative effect of independent commissioners on accrual earnings management and real earnings management of production costs. However independent commissioners might not reduce real earnings management of discretionary expenses and cash flows from operations. Further, independent commissioners become more effective to monitor real earnings management of production costs after the adoption of IFRS. However, independent commissioners become less effective to monitor accrual earnings management and real earnings management discretionary expenses and cash flows from operations after the IFRS adoption

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