



The Role of Earnings Management, Family Firms in the Value Relevance of Earnings and Book Value of Equity, Before and After IFRS Adoption

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ABSTRACT

This study examines the impact of earnings management and family firms on the value relevance of earnings and the book value of equity before and after IFRS adoption. The samples were manufacturing companies listed on the Indonesia Stock Exchange (IDX). Based on panel data analysis, the results show that before IFRS adoption, when family firms engage in earnings management, there is no reduction of the value relevance of earnings and there is no increase in the value relevance of book value. After IFRS adoption, when family firms engage in earnings management, there is a reduction of the value relevance of earnings but there is no increase in the value relevance of book value. This result indicates that the entrenchment effect dominates family firms in Indonesia after IFRS adoption.

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INTRODUCTION

Value relevance can be defined as the significant coefficient of accounting information on stock price (Marquardt and Wiedman, 2004) or the R² value of accounting earnings and book value regressions on stock prices (Brown, Lo and Lys, 1999). The higher the value relevance, the more financial statements can be relied upon to make investment decisions and accordingly the greater the association between financial statement items and a firm's stock price or return (Francis and Schipper, 1999; Sami and Zhou, 2004). A consistent approach given by Hellström (2006) postulates that the accounting information will bear relevance and reflect the stock prices if users find them useful.

The establishment of IFRS aims to develop internationally-recognized, high-quality financial reporting standards. The International Accounting Standards Committee (IASC) and its successors, the International Accounting Standards Board (IASB), have issued principle-based standards (Barth, Landsman and Lang, 2008). There are claims that the adoption of International Financial Reporting Standards (IFRS) improves the function of global capital markets by providing comparable and high-quality information to investors (Barth, Landsman and Lang, 2008).

Up to 2008, most accounting principles applied in Indonesia were adapted from US GAAP. The Indonesian Institute of Chartered Accountants (IAI) later announced an official statement about the plan to fully converge Indonesian PSAK (Statement of Financial Accounting Standards) with IFRS on 1 January 2009, effective from 1 January 2012 (Cahyonowati and Ratmono, 2012).

Existing studies show conflicting evidence on the value relevance of accounting information under the International Accounting Standards (IAS)/IFRS versus domestic General Accepted Accounting Principles (GAAP). Studies revealed that earnings and book values are more relevant based on IFRS standards than domestic GAAP (Barth et al., 2008; Karampinis and Hevas, 2009; Suadiye, 2012; Alali and Foote, 2012; Kouki, 2018), while other studies concluded that IFRS adoption had no effect, or produced limited effect on the relevance of book value and earnings (Clarkson et al., 2011).

The quality of accounting information correlates with management as the compiler of financial statements. The management has access to private information and information about the company's prospects in the future, more than the investors do, which leads to information asymmetry. This condition encourages management to carry out opportunistic conducts and implement accounting policies following their interests. Moreover, the accounting standards provide the flexibility to prefer a set of policies if management performance is measured based on earnings (Healy, 1985). This dysfunctional behavior is called earnings management behavior.

As a consequence of the earnings management behavior, the financial statements no longer reflect the actual conditions; thus the investors are unable to rely entirely on the information presented to measure the company's performance (Marquardt and Wiedman, 2004). To guarantee the availability of better information, investors are required to find other alternative sources to conduct such a measure.

Most companies around the world are family-owned businesses (Burkart, Panunzi and Shleifer, 2003). Traditional agency conflicts, between owner-manager, i.e. type I agency problems are reduced in family-owned companies that go public (Anderson, Mansi, and Reeb, 2003; Demsetz and Lehn, 1985; Villalonga and Amit, 2006). However, the concentration of ownership and management in these companies can cause type II agency problems, as families can act opportunistically and take over wealth from companies at the expense of minority shareholders (Shleifer and Vishny, 1986). Because most of the publicly traded companies in Indonesia are family-owned companies, there is a risk of type II agency problems.

This study makes several contributions. First, the result serves as a piece of additional evidence to the literature on value relevance and the role of earnings management before and after IFRS adoption. Since most of the existing studies on value relevance and IFRS were carried out with data from the United States and European countries, this study fills the gaps in the existing literature by examining the effects of earnings management in emerging markets. Studies on the effect of family ownership on value relevance are still very rarely carried out in both developing and developed countries. The family company presents a unique agency arrangement. There are two possible conflicting effects of the alignment and entrenchment hypothesis, so the effect on the value relevance is interesting to examine.

REVIEW OF LITERATURE

IFRS adoption in Indonesia

Indonesia supports the globalization of accounting standards and has been involved in harmonizing accounting standards (Hamidah, 2017). Between 1 January 2008 and 1 January 2012, the Indonesian Financial Accounting Standard Board (Dewan Standar Akuntansi Keuangan/ DSAK) endorsed 35 PSAKs adopted from IFRS, along with 20 interpretations of financial accounting standards. Specifically, there is one PSAK effective as per 1 January 2009, 16 PSAKs effective as per 1 January 2011, and 18 PSAKs implemented as per 1 January 2012. In general, Indonesian accounting standards in 2012 were equivalent to IFRS as at 1 January 2009 (IAI, 2012).

The completion of the first phase of the IFRS convergence process was marked by the publication of the codified Indonesian accounting standards as of 1 June 2012. After completing the first phase, the DSAK started the second phase of the IFRS convergence program that covers the period between 2012 and 2015. The main aim of this phase was to reduce the differences between Indonesian accounting standards as of 1 June 2012 and IFRS. The progress of the second phase of the IFRS convergence was marked by the publication of the codified Indonesian accounting standards as of 1 January 2015.

With this pronouncement, the Indonesian accounting standards in January 2015 becomes equivalent to IFRS as per 1 January 2014 (IAI, 2015). This progress means that the gap between Indonesian accounting standards and IFRS has been narrowed down, from three years in the first phase to one year in the second phase. Indonesia is yet to decide on the deadline for full convergence with IFRS. The current focus of the standard-setting agenda is maintaining the one-year gap between the Indonesian accounting standards and IFRS.

Opportunistic and Informational Earnings Managements

Signaling theory and agency theory are often used to explain the relationship between earnings management and the value relevance of accounting information. Based on signaling theory, earnings management can be used to signal company performance (Morris, 1987). Managers may practice discretion over earnings to communicate private information to the stockholders and the general public (Jiraporn, P. et al 2008; Arya, Glover, and Sunder, 2003). If this is the case, then, earnings management may not be injured to the stockholders and the general public.

Within the framework of agency theory, prior studies found that managers are likely to manage earnings opportunistically. The opportunistic behavior will cause stakeholders to question the value relevance of accounting information (Dechow and Skinner, 2000). Since the financial statements do not reflect the information from an accurate and fair point of view, therefore, this information cannot be relied upon in assessing firm performance and value as earnings management has been proven to decrease the value relevance of accounting information (Habib, 2004).

Family Firms

Based on agency theory, Jensen and Meckling (1976) state that companies with managers as sole shareholders (100%) will have an agency cost level of zero. Family involvement in the business has the potential to increase or decrease financial performance caused by agency costs (Chrisman, Chua and Litz, 2004). This agency cost can arise when a family company employs outsiders as an agent in the company. According to Fama and Jensen (1983), agency problems that occur between owners and company management can be reduced or minimized by having a family occupying a position in management because decision making and control are carried out by the same agent namely family members so as to minimize agency costs that arise to monitor the decisions made.

The traditional view that the entrenchment effect holds that family businesses are less efficient because concentrated ownership creates incentives for controlling shareholders to take wealth from minority shareholders (Shleifer and Vishny, 1997). Another view is the alignment effect, which argues that companies with high family ownership have an incentive to report earnings in good faith to maintain their reputation (Wang, 2006).

HYPOTHESES DEVELOPMENT

Earnings Management and Value Relevance of Earnings and Book Value of Equity

Within the framework of agency theory, prior studies are found that managers are likely to manage earnings opportunistically. Opportunistic earnings management results in the manipulation of economic and financial data operated by managers to achieve predetermined profit levels. In general, managers have an incentive to hide their deteriorating performance by using accounting options to increase earnings (Habib, Bhuiyan and Islam, 2013).

Studies of the impact of earnings management on the value relevance still produce mixed results. Several studies have found that earnings management causes a decrease in the relevance of the value of accounting information (Shan, 2015), an increase in the value relevance (Hassan et al., 2016); a decrease in the value relevance of earnings (Mostafa, 2017); an decrease of the value relevance of earnings and a increase of the value relevance of book value (Marquardt and Wiedman, 2004; Callao, Cimini and Jarne, 2016).

Some opinions support the positive relationship between IFRS adoption and the quality of financial reporting. First, the financial reporting process is becoming more transparent due to the requirements of IFRS for more comprehensive disclosure (Daske et al. 2008). Second, by tightening accounting choices and reducing the number of reporting policies, opportunistic earnings management actions can be reduced, thereby improving accounting quality (Barth, Landsman and Lang, 2008; Alhadi, Senik and Johari, 2018). One major criticism of IFRS is its heavy reliance on judgment when applying accounting standards, particularly for fair value measurement. Increased subjectivity on accounting estimates could create more opportunities to engage in upward accrual-based earnings manipulation (Ho, Liao, and Taylor, 2015).

La Porta, Lopez-de-silanes, & Shleifer (1999) and Leuz et al. (2003) show that Indonesia is in a cluster of code-law countries with weak investor monitoring and protection mechanisms so that it has more intensive earnings management practices than common law countries. The adoption of IFRS makes Indonesian accounting standards more principles-based. Consequently, it is likely to affect the level of earnings management and ultimately influence the level of value relevance. Thus, the trend of intensive earnings management practices in Indonesia is likely to change with the adoption of IFRS. Based on the preceding, the hypotheses of this research are constructed as follows:

H1A: The reduction of the value relevance of earnings due to the earnings management is changed after the period of IFRS adoption compared to before the adoption of IFRS.

Earnings reliability becomes questionable when there is a motivation for the manipulation of earnings (Healy and Wahlen, 1999; Dechow and Skinner, 2000). Several studies have shown that the two variables (earnings and book value) complement each other; when the value relevance of earnings decreases, the value relevance of the book value will increase (Collins, Maydew and Weiss 1997; Burgstahler and Dichev, 1997). The employment of the earnings management leads to the reducing reliability of earnings since the earnings figure may no longer reflect an accurate and fair firm performance. Researches has found that opportunistic earnings management decreases the value relevance of earnings and increases the value relevance of book value (Marquardt and Wiedman, 2004; Callao et al., 2016). This study examined whether earnings management leads to the change of investors' preference in investing, from earnings valuation to book value, before and after IFRS adoption, for which the hypotheses proposed as follows:

H1B: The increase of the value relevance of book value due to earnings management is changed in the period after IFRS adoption compared to the before IFRS adoption period.

Family Firms, Earnings Management and Value Relevance of Earnings and Book Value of Equity

Based on agency theory, research has identified two different effects on family ownership in companies, namely the alignment effect and the entrenchment effect (Wang, 2006). The alignment effect proposes that the interests between principals and agents are more aligned in family-owned companies, and thus agency problems are minimized (Bhaumik and Gregoriou, 2010). Another view holds that concentrated ownership can lead to an increase in the entrenchment effect (Shleifer and Vishny, 1986). In this situation, controlling shareholders have the opportunity to take over wealth from minority shareholders.

In family firms, there is commitment can be so strong that they will do almost anything to ensure the survival of the company, including turning a blind eye to deviant management behaviors such as earnings management (Hasnan, Rahman and Mahenthiran, 2013). Using this agency framework with two different effects of alignment and entrenchment effects, this study investigates how family ownership is one of the determinants that influence the relationship between earnings management and the value relevance of earnings, with the direction of the relationship that cannot be determined yet. Thus, the hypothesis proposed is as follows.

H2A: The change of the value relevance of earnings in family firms with the presence of earnings management is different after IFRS adoption compared to before IFRS adoption.

If the alignment effect dominates, the company is able to suppress earnings management, thus, if earnings management decreases, the relevance of earnings will increase, the relevance of book values will decrease, this is consistent with the literature that if the reliability of one measure is low, other measures will become more relevant (Burgstahler and Dichev, 1997; Collins et al., 1997), Whereas if the entrenchment effect dominates, the family company is better at monitoring managerial opportunistic earnings reports, earnings management increases, the relevance of earnings will decrease and the relevance of book values will increase. From the explanation above, it appears that the alleged influence of the family company on the relationship between earnings management and book value relevance cannot be determined in its direction. Thus, this study sets the following hypotheses:

H2B: The change of the value relevance of book value in family firms with the presence of earnings management is different after IFRS adoption compared to before IFRS adoption

RESEARCH METHODOLOGY

Population and Sample

The population of this study is manufacturing companies listed on the Indonesia Stock Exchange from 2007 to 2017. Manufacturing companies were selected because they tend to have similar accruals characteristics and constitute the largest group of companies on the IDX. The target population is manufacturing companies listed on the Indonesia Stock Exchange from 2007 to 2017 and presenting financial statements in rupiah. The period of 2007-2017 was selected since the full adoption of IFRS was effective from 1 January 2012 (Cahyonowati and Ratmono, 2012), and the testing period commenced five years before and six years after IFRS adoption. The sampling technique applied was simple random sampling. This method was preferred due to the homogeneity of the population members.

In addition to financial statements taken from IDX, the data for this study was also obtained from the Indonesian Capital Market Directory (ICMD), whereas the data on the publication date, financial statements, and the stock price were acquired from PT Indonesian Capital Market Electronic Library (ICaMEL). With a random sampling technique, the sample obtained consists of 495 observations before IFRS adoption and 706 observations after IFRS adoption from manufacturing companies listed on the Jakarta Stock Exchange (IDX).

Operational Definition and Measurement of Variables

Earnings Management

Discretionary accruals were operated in this research as an indicator of earnings management. To estimate the discretionary accruals, cross-sectional Jones model was employed, with the modification by Kothari, Leone, and Wasley (2005):

$$\text{Accruals}_t = a + b (\text{Assets}_{t-1}) + c \Delta \text{Sales}_t + d \text{PPE}_t + e \text{ROA}_t + \mu_t \quad (1)$$

In Regression (1), the total accruals (Accruals); change in sales (ΔSales); and gross property, plant, and equipment (PPE) are respectively deflated by the total assets at the beginning of the year (Assets). Return on

assets (ROA) is added as an additional control variable since previous researches found that the Jones model is misspecified for the well-performing or poor-performing firms (Kothari, Leone and Wasley, 2005). ACCR_{it} is the total accruals of firm *i* in year *t*, defined as earnings before extraordinary items subtracted by the operating cash flows; TA_{it-1} is the total assets of the firm *i* in year *t-1* of the observation. Applying the parameter estimates to the actual values for each firm-year yields an estimate of total accruals. The difference between actual total accruals and this estimate generates the proxy for the discretionary accruals (AB_DA). AB_DA reflects the extent of discretionary accruals. We adopt the study by Ho et al. (2015) in creating the indicator variables to measure the extent of accruals earnings management, a value of 1 (one) was assigned to the dichotomous variable, AEM, for firm-year with positive AB_DA to indicate the earnings management. AEM is assigned a value of zero otherwise.

Value Relevance

To test our first hypothesis, we compare the value relevance of earnings and book value during the period before and after the adoption of IFRS-based accounting standards in Indonesia. This study adopted a price model developed by Ohlson (1995) and Feltham and Ohlson (1995). The model is extended to capture the effect of earnings management (AEM) on the value relevance of earnings and book value before and after IFRS adoption as follows:

$$P_{it} = a_0 + a_1 EPS_{it} + a_2 BV_{it} + a_3 AEM + a_4 AEM \times EPS_{it} + a_5 AEM \times BV_{it} + \varepsilon_{it} \quad (2)$$

Where:

- P_{it} : the log price of the stock of firm *i* at the publication date of the financial statement for year *t*
- EPS_{it} : earnings per share of firm *i* during the year *t*
- BV_{it} : book value per share of firm *i* at the end of year *t*
- ε_{it} : other value-relevant information of firm *i* for year *t*
- IFRS : dummy variable of IFRS adoption, 1: IFRS adoption period; 0= otherwise
- AEM : dummy variable earnings management of firm *i* during year *t*, 1: discretionary accruals are positive; 0: otherwise

The regression model in equation (2) is applied to sub-samples before and after IFRS adoption. The a₄ slope coefficient represents the value relevance of earnings in the engagement of earnings management. Likewise, the a₅ slope coefficient represents the value relevance of book value in the engagement of earnings management.

From hypothesis 1A, it is expected that a₄ is negative, indicating a reduction in the value relevance of earnings in firms practicing earnings management. Furthermore, a₄ (after IFRS adoption) is expected different from a₄ (before IFRS adoption). Conversely, from hypothesis 1B, we expect that a₅ is positive, demonstrating the increase of value relevance of book value of equity in such firms as the market shifts its trust away from earnings to the book value of equity. Furthermore, we expect that a₅ (after IFRS adoption) different from a₅ (before IFRS adoption).

In the next step, the equation (2) model is applied to subsamples of family firms and non-family firms, with the period before and after IFRS adoption. The a₄ slope coefficient represents the value relevance of earnings in the engagement of earnings management. From hypothesis 2A, we expect that a₄ is not zero indicating the change of value relevance of earnings in firms practicing earnings management. Furthermore, we expect that a₄ coefficient of family firms before IFRS adoption with a₄ coefficient of family firms after IFRS adoption is not the same, indicating that the change of earnings value relevance in family firms exercising earnings management after IFRS adoption is different compared to before IFRS adoption. The a₅ slope coefficient represents the value relevance of book value in the engagement of earnings management. From hypothesis 2B, we expect that a₅ is not zero indicating the change of value relevance of earnings in firms practicing earnings management. Furthermore, we expect that a₅ coefficient of family firms before IFRS adoption with a₅ coefficient of family firms after IFRS adoption is not the same, indicating that the change of earnings value relevance in family firms exercising earnings management after IFRS adoption is different compared to before IFRS adoption.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 1 presents the sample distribution based on the manufacturing industry subsector according to the classification contained in the Indonesia Factbook, with a total of 1201 samples.

Table 1 Sampling Frame

Subsector	Number of firms	Number of firm-year
Food and beverages	20	171
Chemicals	12	86
Metal and allied products	14	116
Plastics & Packaging	10	66
Pulp and paper	7	52
Ceramics, glass, porcelain	6	58
Textile, garment	18	91
Automotive & Components	17	151
Footwear	2	21
Animal feed	5	46
Wood industries	3	16
Houseware	3	20
Pharmaceuticals	9	87
Tobacco manufacturers	4	33
Cable	7	50
Cosmetics and household	5	40
Photographic	3	28
Cement	5	41
Machinery and heavy equipment	2	6
Electronics	2	22
Total	154	1201

Table 2 presents the result of descriptive statistical tests of the main variables of the study, comprising the log price of the stock, earnings, book value of equity, earnings management, and family firms

Table 2 Descriptive Statistics

Variable	Minimum		Maximum		Mean		Standard Deviation	
	Pre IFRS	Post IFRS	Pre IFRS	Post IFRS	Pre IFRS	Post IFRS	Pre IFRS	Post IFRS
LOGPRICE	1.699	1.699	5.161	5.301	2.872	2.946	0.749	0.726
EPS	-3780	-17350	12120	38701	336	331.86	1085	2573
BV	-12609	-12182	27267	99208	3592	1721	3537	5506
AEM	0.00	0.000	1.000	1.000	0.547	0.594	0.498	0.491
FF	0.00	0.000	1.000	1.000	0.765	0.777	0.425	0.416

The means of discretionary accruals (AEM) before and after IFRS adoption are 0.547 and 0.594 respectively, indicating that 54.7% and 59.4% of firm-years report positive discretionary accruals (income-increasing earnings management) before and after IFRS adoption. The means of log price after IFRS adoption is 2.946, higher than that before IFRS adoption of 2.872, indicating that the average stock price after the adoption of IFRS is higher than that before the adoption of IFRS. The means of EPS are 336 and 332 respectively before and after IFRS adoption, indicating that the average firm-year experienced positive lower earnings per share after IFRS adoption than before IFRS adoption. The means of book value are 1721 and 3592, respectively, indicating the lower means of book value after IFRS adoption compared to before IFRS adoption. The means of family firms (FF) before and after IFRS adoption are 0.765 and 0.777 respectively, indicating that 76.5% and 77.7% of firms-years included in family firms before and after IFRS adoption.

Earnings Management and The Value Relevance of Earnings and Book Value of Equity Before and After IFRS adoption.

Table 4 presents the result of the multiple regressions that examine the impact of earnings management on the value relevance of earnings and book value of equity before IFRS adoption.

Table 3 The Result of H1 and H2 Testing

Variable	Pre-IFRS	Post-IFRS
C	2.7806 (0.000)	2.8235 (0.000)
EPS	5.29x10 ⁻⁵ (0.8405)	-2.10 x10 ⁻⁴ (-0.5972)
BV	1.21x10 ⁻⁴ (7.345)***	9.85x10 ⁻⁵ (7.2346)***
AEM	-0.2062 (-9.606)***	-0.0697 (-2.3019)**
AEM x EPS	-0.206 (-9.606)	-1.96 x10 ⁻⁴ (-3.5409)***
AEM x BV	-1.93x10 ⁻⁶ (-0.105)	3.15x10 ⁻⁵ (1.4737)
F_stat	127.01 (0.0000)	31.5936 (0.0000)
Adj R ²	0,5610	0,4816
N	494	706

As displayed in table 3, the coefficient of EPS of the price model regression before and after IFRS adoption are respectively 5.29 x10-5 (insignificant) and -2.10 x10-4 (insignificant) at $\alpha = 5\%$ with t value of 0.8405 (before IFRS adoption) and -0.5972 (after IFRS adoption). This result shows that earnings have no value relevance before and after IFRS adoption. The coefficients of book value from the regression before and after IFRS adoption are 1.21x10-4 and 9.85x10-5, respectively. Both are significant at $\alpha = 1\%$ with the t value of 7.345 (before IFRS adoption) and 7.2346 (after IFRS adoption). These results suggest that the book value reported after IFRS adoption has a lower value relevance compared to that before IFRS adoption.

Before IFRS adoption, the relationship between AEM x EPS and stock price, and the relationship between AEM x BV and stock price are not significant with a coefficient of -0.206 for the former and -1.93x10-6 for the latter. This means that before IFRS adoption, there is no effect of earnings management to value relevance of earnings and book value. These results indicate that before IFRS adoption, when firms engage in earnings management, there is no reduction of the value relevance of earnings and there is no increase in the value relevance of book value.

After the adoption of IFRS, there is a negative and significant effect on the interaction between AEM x EPS and the stock price at $\alpha = 1\%$ with a coefficient of -1.96 x10-4, the relationship between AEM x BV and stock price are not significant with a coefficient of 3.15x10-5. This means that after the adoption of IFRS, firms engaging earnings management have a lower value relevance of earnings than firms that do not engage earnings management. However, there is no effect of earnings management to value relevance of book value. These results indicate that after IFRS adoption, when firms engage in earnings management, there is a reduction of the value relevance of earnings but there is no increase in the value relevance of book value.

Earnings Management, Family Firms, and The Value Relevance of Earnings and Book Value of Equity Before IFRS Adoption.

Table 4 presents the result of the multiple regressions that examine the impact of earnings management on the value relevance of earnings and book value of equity with subsamples family and non-family firms before IFRS adoption

Table 4 The Result of H2A Testing

Variable	Non Family firms	Family Firms
C	3.2909 (0.0000)	2.6513 (0.0000)
EPS	3.73 x10 ⁻⁵ 0.7175	1.44 x10 ⁻⁴ 2.1502**
BV	5.22 x10 ⁻⁵ (2.7335)**	1.17 x10 ⁻⁴ (7.6737)***
AEM	-0.1394 (-1.9059)*	-0.1693 (-6.3441)***
AEM x EPS	-8.30 x10 ⁻⁶ (-0.1322)	1.22 x10 ⁻⁴ (1.2711)
AEM x BV	.77x10 ⁻⁶ (-0.4064)	1.69 x10 ⁻⁵ (0.8434)
F_stat	5.8095 (0.0000)	101.3579 (0.0000)
Adj R ²	0.1729	0.5341
N	116	379

As displayed in table 4, the coefficient of EPS of the price model of regression in non-family firms and family firms respectively 3.73×10^{-5} (insignificant) and 1.44×10^{-4} (significant) at $\alpha = 5\%$ with t value of 0.7175 (non-family firms) and 2.1502 (family firms). This shows that EPS has value relevance in family firms and not in non-family firms. The results of the book value relevance test provide the coefficient of BV value relevance in both subsample, proved to be significant with the coefficient of 5.22×10^{-5} and 1.17×10^{-4} with $\alpha = 5\%$ and t value of 2.7335 (non-family firms) and $\alpha = 1\%$ with t value 7.6737 (family firms). This result shows the value relevance of book value with a larger number and higher level of significance in non-family firms indicates that book values have a higher value relevance in family firms than non-family firms.

The results of the effect of earnings management to stock prices provide the coefficients in both subsamples, proved to be significant with the coefficient of -0.1693 and -0.1394 with $\alpha = 1\%$; t value of -6.3441 (family firms) and $\alpha = 10\%$; t value of -1.9059 (non-family firms). The result shows that in both subsamples earnings management is opportunistic. Thus, it can be concluded that there is an indication in the family firms, the entrenchment effect is more dominant than the alignment effect.

Before IFRS adoption, both in family firms and non-family firms subsamples, the relationship between AEM x EPS and stock price, and the relationship between AEM x BV and stock price are not significant. In non-family firms, the coefficient of AEM x EPS and AEM x BV are -8.30×10^{-6} for the former and -77×10^{-6} for the latter. In family firms, the coefficients of AEM x EPS and AEM x BV are 1.22×10^{-4} and 1.69×10^{-5} , respectively. This means that in the non-family firms and family firms, there is no change of value relevance of earnings and no change of value relevance of book value. These results indicate that before IFRS adoption, in the non-family firms and family firms, earnings management did not play a role in investors' decision-making based on earnings and book value of equity.

The relevance of accounting information shown by adj R² in 53.41% of family firms is much higher than in non-family firms which is only 17.29%. These results indicate that in the period before IFRS adoption, investors relied more on financial statement information from family firms than non-family firms.

Earnings Management, Family Firms, and The Value Relevance of Earnings and Book Value of Equity After IFRS Adoption.

Table 5 presents the result of the multiple regressions that examine the impact of earnings management on the value relevance of earnings and book value of equity with subsamples family and non-family firms after IFRS adoption.

Table 5 The Result of H2B Testing

Variable	Non Family Firms	Family Firms
C	3.2758 (0.0000)	2.7274 (0.0000)
EPS	-2.9×10^{-5} (-2.9256)**	-2.58×10^{-5} (-0.7376)
BV	9.55×10^{-5} (19.7371)***	1.1×10^{-5} 5.6193***
AEM	-0.0902 (-1.3908)	-0.0337 -1.0147
AEM x EPS	-9.66×10^{-5} -3.4939***	-1.69×10^{-6} -3.0630**
AEM x BV	-2.19×10^{-4} 0.3519	4.59×10^{-6} (0.1750)
F_stat	97.6509 (0.0000)	19.3742 (0.0000)
Adj R ²	0.7829	0.1427
N	153	553

As displayed in table 5, the coefficient of EPS of the price model of regression in non-family firms and family firms are respectively -2.9×10^{-5} (significant) and -2.58×10^{-5} (insignificant) at $\alpha = 5\%$ with t value of -2.9256 (non-family firms) and -0.7376 (family firms). This shows that EPS has value relevance in non-family firms and not in family firms. The results of the BV value relevance coefficient indicate that in both subsamples, the relevance of book value is proven significant with the coefficient 9.55×10^{-5} and 1.1×10^{-5} with $\alpha = 1\%$ with t value of 19.7371 (non-family firms) and 5.6193 (family firms) These results indicate that in family firms the value relevance of book value is lower than non-family firms

Both in family firms and non-family firms, the relationship between AEM x EPS and stock price are significant with negative directions respectively with coefficients of -9.66×10^{-5} and -1.69×10^{-6} with a significance level at $\alpha = 1\%$ with t value of -3.4939 (non-family firms) and at $\alpha = 5\%$ with t value of -3.0630 (family firms). The negative coefficient sign means earnings management decreases the value relevance of earnings or in other words, earnings management decreases investor confidence in reported earnings.

The results of testing the effect earnings management to the value relevance of book value show that both in family and non-family firms, the relationship between AEM x BV and stock price is not significant with coefficients of -2.19×10^{-4} (non-family firms) and 4.59×10^{-6} (family firms). These results indicate that in the non-family firms and family firms, earnings management did not play a role in investors' decision-making based on the book value of equity. Based on investor reaction about earnings management to the value relevance of earnings, investors tend to assume that the earnings management is opportunistic, but this does not necessarily encourage investors to switch to book value. This result indicates that after IFRS adoption, earnings management cannot be the basis for decision making related to the book value of equity, both in family and non-family firms.

The Change of the Value Relevance in the Presence of Earnings Management Before and After IFRS Adoption.

This study examines the change of the value relevance of earnings and book value in family firms with the presence of earnings management before IFRS adoption compared to after IFRS adoption. Before IFRS adoption, when firms engage in earnings management, there is no reduction of the value relevance of earnings and there is no increase in the value relevance of book value. After IFRS adoption, when firms engage in earnings management, there is a reduction of the value relevance of earnings but there is no increase in the value relevance of book value.

The test of value relevance of earnings and book value in family firms with the presence of earnings management before and after IFRS adoption shows the results as follows. Before IFRS adoption, when family firms engage in earnings management, there is no reduction of the value relevance of earnings and there is no increase in the value relevance of book value before IFRS adoption. After IFRS adoption, when family firms engage in earnings management, there is a reduction of the value relevance of earnings but there is no increase in the value relevance of book value. This result indicates that earnings management by managers is opportunistic. Thus there are indications that the entrenchment effect dominates family firms in Indonesia after IFRS adoption.

The value relevance of accounting information shown by adj R² in non-family firms is 78.29% much higher than in family firms which is only 14.27%. These results indicate that in the period after IFRS, investors relied more on financial statement information from non-family firms. It can be concluded that after IFRS adoption, investors assume that non-family firms are more efficient than family firms. This result is contrary to the conditions in the period before IFRS adoption where the value relevance of accounting information of 53.41% (family firms) and 17.29% (non-family firms). The increase of the value relevance of accounting information from non-family firms after IFRS adoption by 61% (78.29% - 17.29%) is higher than the decrease in the value relevance of accounting information from family firms after IFRS adoption by 39.14% (53.41% - 14.27%). Thus it can be concluded that IFRS adoption increases the value relevance of accounting information in Indonesia.

CONCLUSIONS

This study aims to assess the impact of earnings management and family firms on the value of relevance of earnings and book value of equity before and after IFRS adoption. The examination applied to the total sample provides results as following. Before IFRS adoption, when firms engage in earnings management, there is no change both of the value relevance of earnings and book value. After IFRS adoption, when firms engage in earnings management, there is a reduction of the value relevance of earnings but there is no increase in the value relevance of book value.

The examination applied to the sub-sample of family and non-family firms provides results as following. Before IFRS adoption, when family firms engage in earnings management, there is no change in

the value relevance of earnings and book value. After IFRS adoption, when family firms engage in earnings management, there is a reduction of the value relevance of earnings but there is no increase in the value relevance of book value. This result indicates that after IFRS adoption that earnings management by managers is opportunistic. Thus there is an indication that the entrenchment effect dominates family firms in Indonesia after IFRS adoption.

As the limitation of this study, only two types of accounting information were used, namely earnings and book value of equity, in the stock price valuation, and only the price model was taken into account in the valuation model. Further research needs to consider other accounting information in the valuation method, such as cash flows and dividends, and employ the return model in such a method.

REFERENCES

- Alali, F. A. & Foote, P. S. 2012, 'The value relevance of International Financial Reporting Standards: empirical evidence in an emerging market', *International Journal of Accounting*, vol. 47, no. 1, pp. 85–108.
- Alhadi, S. A. B. D., Senik, R. & Johari, J. 2018, 'Institutional Ownership and earnings quality pre- and post-IFRS', *International Journal of Economics and Management*, vol. 12, no. S2, pp. 747–757.
- Anderson, R. C., Mansi, S. A. & Reeb, D. M. 2003, 'Founding family ownership and the agency cost of debt', *Journal of Financial Economics*, vol. 68, no. 2, pp. 263–285.
- Arya, A., Glover, J. C. & Sunder, S. 2003, 'Are unmanaged earnings always better for shareholders?', *Accounting Horizons*, 17, pp. 111–116.
- Barth, M. E., Landsman, W. R. & Lang, M. H. 2008, 'International accounting standards and accounting quality', *Journal of Accounting Research*, vol. 46, no. 3, pp. 467–498.
- Bhaumik, S. K. & Gregoriou, A. 2010, 'Family ownership, tunnelling and earnings management: A Review of the literature', *Journal of Economic Surveys*, vol. 24, 4, pp. 705–730.
- Brown, S., Lo, K. & Lys, T. 1999, 'Use of R2 in accounting research : measuring changes in value relevance over the last four decades', *Journal of Accounting and Economics*, vol. 28, pp. 83–115.
- Burgstahler, D. C. & Dichev, I. D. 1997, 'Earnings, and equity adaptation value', *The Accounting Review*, vol. 72, no. 2, pp. 187–215.
- Burkart, M., Panunzi, F. & Shleifer, A. 2003, 'Family firms', *The Journal of Finance*, vol. 58, no. 5, pp. 2167–2201.
- Cahyonowati, N. & Ratmono, D. 2012, 'IFRS adoption and the value relevance of accounting information', *Jurnal Akuntansi dan Keuangan*, vol. 14, no. 2, pp. 105–115.
- Callao, S., Cimini, R. & Jarne, J. I. 2016, 'Value relevance of accounting figures in the presence of earnings management. Are enforcement and ownership diffusion really enough?', *Journal of Business Economics and Management*, vol. 17, no. 6, pp. 1286–1299.
- Chrisman, J. J., Chua, J. H. & Litz, R. A. 2004, 'Comparing the agency costs of family firms: Conceptual issues and exploratory evidence', *Entrepreneurship Theory and Practice*, vol. 28, pp. 335–354.
- Clarkson, P., Hanna, J.D., Richardson, G.D. and Thompson, R. 2011, 'The impact of IFRS adoption on the value relevance of book value and earnings', *Journal of Contemporary Accounting and Economics*. Elsevier Ltd, vol. 7, no. 1, pp. 1–17.
- Collins, D. W., Maydew, E. L. & Weiss, I. S. 1997, 'Changes in the value relevance of earnings and book values over the past forty years', *Journal of Accounting and Economics*, vol. 24, pp. 39–67.
- Daske, H., Hail, L., Leuz, C. and Verdi, R. 2008, 'Mandatory IFRS reporting around the world: Early evidence on the economic consequences initiative on global markets', *Journal of Accounting Research*, vol. 46, no. 5, pp. 1085–1142.
- Dechow, P. M. & Skinner, D. J. 2000, 'Earnings management: reconciling the views of accounting academics, practitioners, and regulators', *Accounting Horizons*, vol. 14, 2, pp. 235–250.
- Demsetz, H. & Lehn, K. 1985, 'The Structure of corporate ownership: causes and consequences', *Journal of Political Economy*, vol. 93, no. 6, pp. 1155–1177.
- Fama, E. F. & Jensen, M. C. 1983, 'Separation of ownership and control separation of ownership and control', *Journal of Law and Economics*, vol. 26, no. 2, pp. 301–325.

- Feltham, G. A. & Ohlson, J. A. 1995, 'Valuation and clean surplus accounting for operating and financial activities', *Contemporary Accounting Research*, vol. 11, no. 2, pp. 689–731.
- Francis, J. & Schipper, K. 1999, 'Have financial statements lost their relevance?', *Journal of Accounting Research*, vol. 37, no. 2, pp. 319–352.
- Habib, A. 2004, 'Impact of earnings management on value-relevance of accounting information: Empirical evidence from Japan', *Managerial Finance*, vol. 30, no. 11, pp. 1–15.
- Habib, A., Bhuiyan, M. B. U. & Islam, A. 2013, 'Financial distress, earnings management and market pricing of accruals during the global financial crisis', *Managerial Finance*, vol. 39, no. 2, pp. 155–180.
- Hamidah 2017, 'IFRS adoption in Indonesia: Accounting ecology perspective', *International Journal of Economics and Management*, vol. 11, no. S1 , pp. 121–132.
- Hasnan, S., Rahman, R. A. & Mahenthiran, S. 2013, 'Management motive, weak governance, earnings management, and fraudulent financial reporting: Malaysian evidence', *Journal of International Accounting Research*, vol. 12, no. 1, pp. 1–27.
- Hassan, M. S., Mohd-Saleh, N., Rahman, A.F. & Shukor, Z.A. 2016, 'Underinvestment and value relevance of earnings management', *Jurnal Pengurusan*, vol. 46, pp. 99–113.
- Healy, P. M. 1985, 'The effect of bonus schemes on accounting decisions', *Journal of Accounting and Economics*, vol. 7, no. 1–3, pp. 85–107.
- Healy, P. M. & Wahlen, J. M. 1999, 'A Review of the earnings management literature and its implications for standard setting', *Accounting Horizons*, vol. 13, no. 4, pp. 365–383.
- Hellström, K. 2006, 'The value relevance of financial accounting information in a transition economy: The case of the Czech Republic', *European Accounting Review*, vol. 15, no. 3, pp. 325–349.
- Ho, L. C. J., Liao, Q. & Taylor, M. 2015, 'Real and accrual-based earnings management in the pre- and post-IFRS periods: Evidence from China', *Journal of International Financial Management and Accounting*, vol. 26, no. 3, pp. 294–335.
- Indonesian Institute of Accountants (IAI) 2012, *Financial Accounting Standards as of 1 January 2012*, IAI, Jakarta.
- Indonesian Institute of Accountants (IAI) 2015, *Financial Accounting Standards as of 1 January 2012*, IAI, Jakarta.
- Jensen, M. C. & Meckling, W. H. 1976, 'Theory of the firm: Managerial behavior, agency costs and ownership structure', *Journal of Financial Economics*, vol. 3, pp. 305–360.
- Jiraporn, P., Miller, G.A., Yoon, S.S. & Kim, Y.S. 2008, 'Is earnings management opportunistic or beneficial? An agency theory perspective', *International Review of Financial Analysis*, vol. 17, no. 3, pp. 622–634.
- Karampinis, N. & Hevas, D. 2009, 'The effect of the mandatory application of IFRS on the value relevance of accounting data: Some evidence from Greece', *European Research Studies Journal*, vol. 12, no. 1, pp. 73–100.
- Kothari, S. P., Leone, A. J. & Wasley, C. E. 2005, 'Performance matched discretionary accrual measures', *Journal of Accounting and Economics*, vol. 39, pp. 163–197.
- Kouki, A. 2018, 'IFRS and value relevance: A comparison approach before and after IFRS conversion in the European countries', *Journal of Applied Accounting Research*, vol. 19, no. 1, pp. 60–80.
- La Porta, R., Lopez-de-silanes, F. & Shleifer, A. 1999, 'Corporate ownership around the world', *The Journal of Finance*, vol 54, no. 2, pp. 471–517.
- Leuz, C., Nanda, D. & Wysocki, P. D. 2003, 'Earnings management and investor protection: An international comparison', *Journal of Financial Economics*, vol. 69, pp. 505–527.
- Marquardt, C. A. & Wiedman, C. I. 2004, 'The Effect of earnings management on the value relevance of accounting information', *Journal of Business & Accounting*, vol. 31, no. 3 & 4, pp. 297–332.
- Morris, R. D. 1987, 'Signalling, agency theory and accounting policy choice', *Accounting and Business Research*, vol. 18, no. 69, pp. 47–56.
- Mostafa, W. 2017, 'The impact of earnings management on the value relevance of earnings: Empirical evidence from Egypt', *Managerial Auditing Journal*, vol. 32, no. 1, pp. 50–74.
- Ohlson, J. A. 1995, 'Earnings and dividends in equity valuation', *Contemporary Accounting Research*, vol. 11, no. 2, pp. 661–687.
- Sami, H. & Zhou, H. 2004, 'A comparison of value relevance of accounting information in different segments of the Chinese stock market', *The International Journal of Accounting*, vol. 39, pp. 403–427.

- Shan, Y. G. 2015, ‘Value relevance, earnings management and corporate governance in China’, *Emerging Markets Review*, vol. 23, pp. 186-207.
- Shleifer, A. & Vishny, R. W. 1986, ‘Large shareholders and corporate control’, *Journal of Political Economy*, vol. 94, no. 3, pp. 461–488.
- Shleifer, A. & Vishny, R. W. 1997, ‘A Survey of Corporate Governance’, *Journal of Finance*, vol. 52, no. 2, pp. 737–783.
- Suadiye, G. 2012, ‘Value relevance of book value earnings under the local GAAP and IFRS : evidence from Turkey’, *Ege Academic Review*, vol. 12, no. 3, pp. 301–310.
- Villalonga, B. & Amit, R. 2006, ‘How do family ownership, control and management affect firm value?’, *Journal of Financial Economics*, vol. 80, no. 2, pp. 385–417.
- Wang, D. 2006, ‘Founding family ownership and earnings quality’, *Journal of Accounting Research*, vol. 44, no. 3, pp. 619–656.