






“Do family-controlled and financially healthy firms manage their reported earnings? Evidence from Indonesia”

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DO FAMILY-CONTROLLED AND FINANCIALLY HEALTHY FIRMS MANAGE THEIR REPORTED EARNINGS? EVIDENCE FROM INDONESIA

Abstract

This paper examines whether family-controlled and financially healthy firms practice earnings management. The data collection focuses on non-financial firms listed on the Indonesia Stock Exchange for the fiscal year 2017–2019. Family and financially healthy firms are key predictor variables for predicting earnings management behavior. Jones's (1991) modified cross-sectional model measures discretionary accruals (the earnings management indicator). This study reveals a negative relationship between family entities and earnings management practices, suggesting that family-controlled firms are more likely to report a higher quality of earnings. This study also documents that family entities with financial difficulties have more incentive to practice earnings management. Additionally, the study indicates that the involvement of a family member in executive positions leads to lower financial reporting quality. Finally, this study reports a nonlinearity association between family share ownership and the magnitude of earnings management. The study's findings may assist policymakers in considering the costs and benefits associated with various levels of ownership concentration, especially in the hands of family members.

Keywords

family-controlled firms, financially healthy firms, earnings management, earnings quality, Indonesia

JEL Classification

M40, M41, M48

INTRODUCTION

Earnings management has become one of the relatively central research issues in the accounting literature as a result of an increasing number of high-profile accounting scandals across the globe. These unexpected scandals undermine investors' faith in the accuracy of financial reporting and may even obstruct the efficient flow of capital through financial markets (Jackson & Pitman, 2001). Earnings management occurs due to management's inherent discretion in choosing accounting methods for preparing financial reports (Atik, 2009).

Past studies examining the determinants of earnings management have explored various aspects of a company and corporate governance attributes using a sample from different countries. Yet, limited research has been conducted on the relationship between family businesses and earnings management practices (Prencipe & Bar-Yosef, 2011). Family-owned enterprises play an essential role in many parts of the world. They are critical to economic growth and job creation (Claessens et al., 2006). According to Claessens et al. (2006), 73% of firms in Indonesia belong to family members. They contribute 25% of the country's GDP and generate millions of jobs, making them central to Indonesia's economy (PriceWaterhouseCoopers, 2018). Indonesia

may be a good example of an emerging economy with some unique institutional frameworks. First, Indonesia has a history of weak corporate governance and audit environments, as evidenced by the many businesses collapses in the 1997 Asian crisis. Second, according to Joni et al. (2020b), most enterprises in Indonesia are owned by family business groups, making it the country in East Asia with the highest concentration of ownership. Finally, several studies (e.g., Chaney et al., 2011; Joni et al., 2020b) claim that many Indonesian businesses have political ties. As a result, the impact of a firm's political connections on its performance, its financing costs, and the quality of its earnings have become the attention of researchers, academics, and policy-makers (Chaney et al., 2011; Joni et al., 2020a, 2020b). With this in mind, this study poses the following research question: How do Indonesian family-controlled and financially healthy firms engage in earnings management?

1. LITERATURE REVIEW, AIM, AND HYPOTHESES

This study adopts agency theory to explore how family-controlled and financially healthy firms manage their earnings figures. According to Jensen and Meckling (1976), there are two primary agency relationships: the agent-principal relationship (agency problem type I) and the majority-minority shareholder's relationship (agency problem type II).

Conflicts between managers (agents) and owners (principals) typically arise in widely held companies where ownership and control are segregated. Professional managers are more prone to present financial data that differs from the actual economic transactions that underlie it to increase their benefits at the owners' expense (Wang, 2006). This relationship is significantly different from most developing countries, where many firms are highly concentrated in family ownership. Fan and Wong (2002) state that most firms' equity in many developing countries is held by a small group of shareholders, often with strong family ties. This phenomenon creates a new agency conflict between the majority and minority shareholders. Majority (family) owners can use their controlled power to confiscate the profits of minority owners (Salvato & Moores, 2010). This problem is commonly referred to as a principal-to-principal conflict or agency problem type II (Jensen & Meckling, 1976).

There are two views on how family and non-family ownership interact. The pessimistic viewpoint contends that agency conflicts arise more frequently in family-run companies than non-family companies. Due to their interests, family management frequently expropriates the wealth of minority owners (Faccio et al., 2001; Salvato & Moores,

2010). The optimistic view of family businesses suggests that family businesses face fewer agency issues than their counterparts (Anderson & Reeb, 2003). This study assumes that Indonesian family businesses have fewer agency issues (Anderson et al., 2003; Andres, 2008; Joni et al., 2020a).

Anderson and Reeb (2003) note that concentrated ownership in family enterprises reduces the traditional problems of managerial expropriation (agency problem type II), since the family's wealth is tightly tied to the company's success. Family owners put family members in crucial positions, which can potentially monitor and control the company (Demsetz & Lehn, 1985). They also have relatives within the company who are more knowledgeable about the business because they have a more extended period in the industry (Faccio et al., 2001). Moreover, Prencipe and Bas-Yosef (2011) and Andres (2008) suggest that families have invested considerable private capital in the firm, so they tend to be particularly concerned about its survival, hence providing strong incentives to control management activities. These arguments infer that companies under family control are less likely to act opportunistically and, as a result, have higher earnings quality. According to Wang (2006) and Ali et al. (2007), family firms engage in less earnings management because they are better able to monitor and have a thorough understanding of the business operations, which ultimately allows them to detect misreporting.

Many empirical studies document that companies with financial difficulties have incentives to increase their reported earnings (e.g., Campa & Camacho-Minano, 2015; Filip & Raffournier, 2014; Franz et al., 2014). Additionally, past studies (e.g., Dichev & Skinner, 2002; Moyer, 1990)

report that managers of troubled firms systematically take income-increasing actions to keep their jobs and reduce potential intervention by the firms' boards. Likewise, managers of companies at risk of breaching debt covenants have more incentives to practice upward earnings management (Iatridis & Kadorinis, 2009). Similarly, Jaggi and Tsui (1999) argue that companies in precarious financial positions are more prone to report optimistic information in their financial statements.

This paper aims to examine the effect of family-controlled and financially healthy firms on the earnings management practices of Indonesian non-financial listed companies. Consequently, the current study proposes the following hypotheses:

H1: Family-controlled firms are less likely to practice earnings management.

H2: Financially healthy firms are less likely to practice earnings management.

2. METHODOLOGY

2.1. Sample selection

This study employs non-financial listed family companies on the IDX for the fiscal year 2017 to 2019¹. The study identifies family businesses from the Globe Asia Business Magazine article "Family businesses: Maintaining relevance in the modern era" (GlobeAsia, 2019). The study then traced the websites of each group of companies and found 91 firms that continuously published their annual reports throughout 2017–2019. However, 29 entities are financial corporations or do not provide comprehensive information for measuring the variables studied; therefore, the useable sample is 62 corporations or 186 observations. One observation exhibits unique and extreme features (outlier) and is excluded from the research sample. The final sample is 185 observations.

2.2. Proxy for the dependent variable

The modified Jones (1991) model's discretionary accruals are used as a measure for the manage-

ment of earnings. In line with the existing literature in earnings management (e.g., Francis et al., 2016), this study emphasizes the absolute instead of the real sign of the discretionary accruals. Total accruals must be calculated before constructing the value of discretionary accruals:

$$TA_t = (\Delta CA_t - \Delta Cash_t) - (\Delta CL_t - \Delta LTD_t - \Delta IT_t) - DA_t, \quad (1)$$

where TA_t = total accruals in year t ; ΔCA_t = the difference between year t and $t - 1$ in current assets; $\Delta Cash_t$ = the difference between year t and $t - 1$ in cash balance; ΔCL_t = the difference between year t and $t - 1$ in current liabilities; ΔLTD_t = the difference between year t and $t - 1$ in long-term debt balance included in current liabilities; ΔIT_t = the difference between year t and $t - 1$ in income tax payable balance; DA_t = the depreciation and amortization expense in year t .

The TA is then broken down into normal and discretionary accruals using Jones's (1991) modified estimation as follows:

$$TA_{k,t} / TA_{k,t-1} = \alpha_t \left[1 / TA_{k,t-1} \right] + \beta_t \left[(\Delta REV_{k,t} - \Delta AR_{k,t}) / TA_{k,t-1} \right] + \gamma_t \left[PPE_{k,t} / TA_{k,t-1} \right] + \varepsilon_{k,t}, \quad (2)$$

where TA_t = a company's total accruals in industry k for year t ; $TA_{k,t-1}$ = a company's total assets in industry k for year $t-1$; $\Delta REV_{k,t}$ = the difference between year t and $t - 1$ in net sales for a company in industry k ; $\Delta AR_{k,t}$ = the difference between year t and $t - 1$ in accounts receivables balance for a company in industry k ; $PPE_{k,t}$ = a company's gross property, plant & equipment balance in industry k for year t ; $\alpha_j, \beta_j, \gamma_j$ = the industry-specific estimated coefficients; ε_j = the error term.

Normal accruals are the fitted values from Equation 2, and discretionary accruals are the residual value.

2.3. Proxy for independent variables

This study employs family ownership and financially healthy firms as predictors for earnings management. Following Andersen and Reeb

¹ To ensure data homogeneity, this study focuses on non-financial firms due to these companies are dominant in the Indonesian economy (Craig & Diga, 1998).

(2003), the present study identifies family firms based on equity ownership proportions and the involvement of family members in executive or supervisory roles. The assessment of the financial health of firms is of particular importance in this study. Numerous bankruptcy models have been previously developed in the literature (e.g., Altman, 1993; Carcello & Neal, 2000; Mousavi et al., 2015; Tinoco & Wilson, 2013; Zmijewski, 1984). This study employs the financial default prediction model of Altman (1993). The Altman Z-Score model utilizes multiple discriminant analysis (MDA) to classify and identify firms with a high probability of failure (Mselmi et al., 2017). Altman selects five financial ratios that represent a firm's liquidity, profitability, leverage, solvency, and activity and are used to compute the risk score of a company. The Altman score is estimated from the following formula:

$$Z = 1.2 \left(\frac{\text{the working capital}}{\text{total assets ratio}} \right) + 1.4 \left(\frac{\text{the retained earnings}}{\text{total assets ratio}} \right) + 3.3 \left(\frac{\text{the earnings before interest and tax}}{\text{total assets ratio}} \right) + 0.6 \left(\frac{\text{the market value of equity}}{\text{total liabilities ratio}} \right) + 1.0 \left(\frac{\text{the net sales}}{\text{total assets ratio}} \right). \quad (3)$$

where Z shows a firm's propensity to bankruptcy, a firm with a high Z -score has a low probability of going bankrupt. Therefore, per the proposed hypothesis (H_2) and the Altman score, this study would suggest the larger (smaller) the Altman index of a firm, the less (more) likely the firm is to practice earnings management.

Table 1 presents the study samples based on the IDX industry sector and firms' financial health. The study uses an Altman Z-score above 2.99 as the threshold for splitting the sample firms into financially distressed and healthy firms sub-samples, as has been well-established in the literature (Altman, 1993; Casillas et al., 2019).

Table 1 shows that most firms (53 observations or 28.65%) in the sample are in the Property, real estate & building classification. At the same time, the smallest percentage is companies in the Agriculture sector and the Infrastructure, utilities & transportation industry with nine observations (4.86%), respectively. The largest proportion of firms classified as financially distressed is listed in the Property, real estate & building group, with 45 observations or 42.45% of the total distressed firms. In comparison, three observations of the listed firms in the Consumer goods industry were assigned a numeric value indicative of financial difficulties. Interestingly, all firms in the Miscellaneous sector are more likely to experience bankruptcy.

2.4. Proxy for control variables

This study controlled for variables that might impact earnings management practices. Corporate governance structures (board independence, board meeting frequency, audit committee) are included in the regression analysis as it is designed to encourage efficiency and promote accountability of resources used by management. In the literature, effective corporate governance is frequently linked to reliable financial reporting and business performance (Arora & Dharwadkar, 2011; Martinez-Ferrero et al., 2020). To control the potential

Table 1. Sample by the IDX industry sector and financially healthy versus distressed firms

Industry sector	Sample		Distressed Firms		Healthy Firms	
	n	%	n	%	n	%
Agriculture	9	4.86	6	5.66	3	3.80
Mining	18	9.73	12	11.32	6	7.59
Basic industry & chemicals	30	16.22	10	9.43	20	25.32
Miscellaneous industry	12	6.49	12	11.32		
Consumer goods industry	33	17.84	3	2.84	30	37.97
Property, real estate & building construction	53	28.65	45	42.45	8	10.12
Infrastructure, utilities & transportation	9	4.86	6	5.66	3	3.80
Trade, services & investment	21	11.35	12	11.32	9	11.39
Total	185	100.00	106	100.00	79	100.00

accumulative effects of a company's financial performance, return on assets (ROA) is added. Financial performance may impact the opportunistic window of corporate management and incentives for managing earnings (Frankel et al., 2002; Kothari et al., 2005). Firm age is another variable that is considered to influence earnings management behavior. Longer-running companies may have more outstanding expertise in corporate governance and have been exposed to more reputation risks, which are connected with higher earnings quality (Gul et al., 2009). The Big4 auditors are also included in the analysis to control the impact of global accounting firms on the quality of reported earnings. According to earlier research (Frankel et al., 2002), companies audited by Big4 auditors report higher-quality earnings than those of their counterparts.

2.5. Empirical model equations

Multiple regression of the ordinary least squares is the main statistical method for testing hypotheses. The regression models are defined as:

$$\begin{aligned}
 DAC_{it} = & a_i + a_{i1}FAM_{it} + a_{i2}ALTMAN_{it} + \\
 & + a_{i3}BOINDP_{it} + a_{i4}BOMEET_{it} + \\
 & + a_{i5}AUDCOM_{it} + a_{i6}BIG4_{it} + a_{i7}ROA_{it} + \quad (4) \\
 & + a_{i8}AGE_{it} + YEAR\ FIXED\ EFFECT_{it} + \\
 & + INDUSTRY\ FIXED\ EFFECT_{it} \cdot \varepsilon_i,
 \end{aligned}$$

where DAC = the absolute discretionary accruals measured by Jones's (1991) modified model. FAM = the proportion of publicly traded shares that family members own. $ALTMAN$ = takes a value of one if a company's Altman Z-score is higher than 2.99 and zero otherwise. $BOIND$ = the percentage of independent board members. $BOMEET$ = the annual number of supervisory board meetings. $AUDCOM$ = the total members of the audit committee. $BIG4$ = takes a value of one if the company auditor is a Big4 accounting firm and zero otherwise. ROA = the net income to total assets ratio. AGE = the years since the company was founded, expressed as a natural logarithm. $_{it}$ = the firm i in year t . $YEAR\ FIXED\ EFFECT$, $INDUSTRY\ FIXED\ EFFECT$ = the fixed effects for different years and industries.

3. EMPIRICAL RESULTS AND DISCUSSION

3.1. Descriptive statistics

Table 2 shows descriptive statistics for the variables in the analysis. Descriptive statistics for continuous variables are shown in Panel A. In contrast, dummy regression variables are shown in Panel B. Panel A of Table 2 reports that family members hold, on average, 62.47% of the shares of sampled firms. The ratio of independent members on the board of directors is 41.84%, above the 33.33% required by the Financial Services Authority Regulation (POJK) No. 33/2014. The POJK 33/2014 requires the board of directors to hold a meeting at least 1 (one) every 2 (two) months. The average frequency for board meetings is 10, varying from two to 31. The mean size of audit committees is three. This number meets the requirements specified by POJK No. 55 of 2015, which call for at least 3 (three) members.

Table 2. Descriptive statistics of sample firms

Panel A – Continuous Variables					
Variable	Min	Max	Median	Mean	SD
DAC	-0,20	0,29	0,02	0,02	0,09
FAM	19,69	92,40	60,00	62,47	17,02
BIND	20,00	100,00	40,00	41,84	10,07
BMEET	2,00	31,00	10,00	10,00	3,93
AUDCOM	2,00	5,00	3,00	3,06	0,32
ROA	-20,90	45,56	5,33	5,62	6,95
AGE	4.92	68.33	35.50	35.04	13.15
Panel B – Categorical Variables			n	%	
Variable					
Big4			90	48,65	
Non-Big4			95	51,35	
Financially healthy firms			79	42.70	
Financially distressed firm			106	57.30	

The low average ROA (5.62%) indicates that family businesses suffered financial hardship in the sample years. The mean AGE is 35.04 years, and the median is 35.50 years. Panel B reports that Big4 firms audit around 48.65% of the sample firms, implying that Big4 auditors are a relatively dominant provider of audit services in Indonesia's capital market. Finally, financially healthy firms represent 42.70% of the sample.

Table 3. Pearson correlation matrix

	FAM	ALTMAN	BIND	BMEET	AUDCOM	BIG4	ROA	AGE
DAC	-0.223*	-0.286*	0.108	0.174**	-0.195*	-0.291*	-0.052	-0.039
FAM		0.319*	0.013	0.020	0.022	-0.136	0.140	-0.026
ALTMAN			-0.116	-0.017	0.290*	0.187*	0.486*	-0.007
BIND				-0.063	0.008	-0.165**	-0.051	-0.001
BMEET					-0.209*	0.014	-0.039	0.203*
AUDCOM						0.149**	0.287*	-0.183**
BIG4							-0.280*	0.069
ROA								-0.073

Note: * and ** indicate significance at 1% and 5% levels, respectively.

3.2. Correlations

This study uses Pearson's correlation matrix to test for multicollinearity across the variables. Table 3 reports that correlation results fully support the study hypotheses. As hypothesized, the finding shows that family ownership (FAM) and financially healthy firms (ALTMAN) are significant negative correlated (both at $p < 0.01$) with DAC (a proxy for earnings management). The results also report a low correlation coefficient (0.319) between the independent variables. All variable correlation coefficients are within the crucial range of 0.80 (Cooper & Schindler, 2003). Thus, the regression models show no evidence of multicollinearity across variables.

4. RESULTS

Table 4 provides the results of multi-regression for H_1 and H_2 testing. Panels A and B exhibit the re-

gression results of a single independent variable, while Panel C displays the results for each independent variable.

All regression model estimates reported in Panels A through C are significant (F-statistic $p < 0.01$). Multicollinearity is not a problem in the model estimations, as seen by all variance inflation factor (VIF) values lower than 10. This finding is in line with Table 3. Panels A and C demonstrate that the FAM's coefficients are significantly negative (both at $p < 0.01$), indicating that a high percentage of shares of companies owned by family members is related to a lower level of earnings management. Therefore, H_1 is supported. These results support the assertion made by Wang (2006) and Ali et al. (2007) that family firms report higher-quality earnings. However, the results contradict studies by Chaney et al. (2011) and Chi et al. (2015), who note that family enterprises tend to develop polit-

Table 4. Regression results²

Variables	Panel A		Panel B		Panel C		VIF
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat	
(Constant)		4.206*		2.298**		3.292*	
FAM	-0.078	-3.287*			-0.063	-3.279*	1.172
ALTMAN			-0.051	-3.761*	-0.037	-2.638*	1.529
BIND	0.065	1.130	0.044	0.750	0.049	0.858	1.045
BMEET	0.004	2.579*	0.004	2.510*	0.004	2.659*	1.084
AUDCOM	-0.132	-2.170**	-0.087	-1.400	-0.100	-1.637	1.218
BIG4	-0.056	-4.589*	-0.046	-3.748*	-0.053	-4.425*	1.180
ROA	0.002	1.789***	0.002	2.520*	0.003	2.704*	1.421
AGE	0.001	-1.137	0.001	-0.889	0.001	-0.990	1.083
Summary							
Adjusted R ²	0.195		0.179		0.222		
F-statistic	7.381*		6.718*		7.546*		
Observations	185		185		185		

Note: *, ** and *** indicate significance at 1%, 5% and 10% levels, respectively.

2 We also perform the tests using an alternative proxy of earnings management (performance-matched discretionary accruals purposed by Kothary et al. (2005). These results are qualitatively the same as those reported in Table 4.

ical relationships and produce lower-quality reported earnings.

The ALTMAN coefficients in both models (see Panels B and C) are negative and highly significant (at $p < 0.01$). The findings suggest that firms are less likely to practice earnings management if their Altman Z scores are more than 2.99. Thus, these findings support H_2 . The results confirm many empirical studies that indicate distressed firms are more prone to practice earnings management by increasing their reported earnings (Campa & Camacho-Minano, 2015; Filip & Raffournier, 2014; Franz et al., 2014). Similarly, Dichev and Skinner (2002) and Moyer (1990) note that managers of troubled firms have incentives to engage in income-increasing accounting practices to maintain their financial performance.

Regarding control variables, this study finds that BMEET, BIG4, and ROA help explain earnings management behavior. Coefficients on BMEET and ROA are positive, while BIG4 is significantly negative across all models. These findings confirm that compared to companies that use the audit services of non-Big4 firms, the level of earnings management is much lower among companies audited by the Big4 auditors. Interestingly, this study reveals that companies are more likely to manage their earnings figures if they (1) hold board meetings more frequently and (2) have better financial performance.

4.1. Robustness check

Previous studies document that earnings management varies across industries and in different periods (Al-Shaer & Salama, 2015; Salehi et al., 2019). Therefore, this study undertakes a further analysis (see Table 5) that considers industry and year effects. The results of the Hausman test suggest adopting fixed-effect estimates to account for the industry and year-specific characteristics.

The multiple regression analysis performed utilizing the fixed effect test (Table 5), and the main findings in Table 4 are generally consistent. A difference is that Table 5's explanatory powers (adjusted R^2) are marginally higher than those found in Table 4's data.

4.2. Additional analyses

This study performs two additional analyses to increase the main findings' reliability. First, the study considers the role of the family members as one of the family business characteristics. The impact of active versus passive family involvement in the enterprise is therefore examined in this study. Family members with senior management roles can more easily align a company's interests, enhancing the company's performance and reputation (Anderson & Reeb, 2003; Davids et al., 1997). However, they also can negatively affect a firm's performance. Family management tends to ex-

Table 5. Fixed effect regression results

Variables	Panel A – Year fixed effect		Panel B – Industry fixed effect		Panel C – Year and industry fixed effect		
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat	VIF
(Constant)		3.325*		3.317*		3.349*	
FAM	-0.063	-3.287*	-0.076	-3.701*	-0.075	-3.698*	1.444
ALTMAN	-0.036	-2.560*	-0.035	-2.495*	-0.034	-2.408**	1.686
BIND	0.049	0.866	0.050	0.907	0.050	0.909	1.080
BMEET	0.004	2.631*	0.004	2.426**	0.004	2.394**	1.164
AUDCOM	-0.098	-1.616	-0.084	-1.358	-0.083	-1.343	1.349
BIG4	-0.054	-4.452*	-0.051	-4.050*	-0.052	-4.087*	1.404
ROA	0.002	2.546*	0.003	3.243*	0.003	3.078*	1.469
AGE	0.001	-0.910	0.001	-1.394	0.001	-1.312	1.153
Year dummies	Yes		No		Yes		
Industry dummies	No		Yes		Yes		
Summary							
Adjusted R^2	0.226		0.276		0.280		
F-statistic	6.371*		5.679*		5.217*		
Observations	185		185		185		

Note: * and ** indicate significance at 1% and 5% levels, respectively.

Table 6. Active family control and earnings management

Variables	Panel A – Family as a director		Panel B – Family as a BOD		Panel C – Active family control	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
(Constant)		2.995*		2.643*		2.753*
FAM	-0.056	-2.999*	-0.058	-3.051*	-0.054	-2.867*
ALTMAN	-0.047	-3.364*	-0.037	-2.672*	-0.048	-3.415*
BIND	0.051	0.927	0.067	1.181*	0.059	1.044
BMEET	0.003	2.400**	0.004	2.633*	0.003	2.373**
AUDCOM	-0.094	-1.579	-0.069	-1.100	0.003	-1.439
BIG4	0.050	-4.254*	-0.058	-4.755	0.005	-4.307
ROA	0.003	2.728*	0.002	2.563*	0.005	2.738*
AGE	0.001	-1.417*	0.001	-1.287	-0.060	-1.563
FAM AS DIR	0.036	3.081*			0.031	2.444**
FAM AS BOD			0.009	1.726	0.011	0.742
Year dummies		Yes		Yes		Yes
Industry dummies		Yes		Yes		Yes
Summary						
Adjusted R ²	0.257		0.233		0.255	
F-statistic	8.086*		7.223*		7.314*	
Observations	185		185		185	

Note: * and ** indicate significance at 1% and 5% levels, respectively.

appropriate minority shareholders' wealth for their interest (Salvato & Moores, 2010). This study uses two separate active family controls to examine the role of family directors or executives (FAM AS DIR) and the family involvement on the supervisory board (FAM AS BOD). If a family controls the company and one or more family members hold director (executive) positions, the value of FAM AS DIR is one; otherwise, it is zero. If a family controls the company and one or more of its members serve in a supervisory capacity on the board, the value for FAM AS BOD is one; otherwise, it is zero. Table 6 summarizes the results of the additional test.

Panels B and C report that coefficients on FAM AS BOD are positive but statistically insignificant, inferring that family members on the board of directors have no significant impact on earnings management behavior. The findings in Panels A and C demonstrate that the coefficients on FAM AS DIR are positive and significant at $p < 0.01$ and $p < 0.05$, respectively. These results imply that family members sitting in management or executive positions enhance earnings management and, thus, lower financial reporting quality. A possible explanation is that family management experiences hardship in financial performance. Further analysis (not tabulated) confirms that the financial performance of family managers is significantly lower than

the profitability of firms managed by non-family members. This finding aligns with other research (Frankel et al., 2002; Kothari et al., 2005), which suggests that less profitable companies are linked to more aggressive earnings management.

Second, the current study considers the impact of nonlinearities in the effects of family ownership on earnings management practices. Family-owned enterprises may have favorable and unfavorable consequences on their performance (Anderson & Reeb, 2003). The performance of a company improves with greater ownership concentration. Yet, the relation between the two variables might be negative at lower share ownership levels. These two hypotheses predict a nonlinear relationship between family-controlled firms and the magnitude of earnings management. Table 7 displays the test results for nonlinear relationships between family firms and management of earnings behavior.

The results reveal that family ownership (FAM) has a positive coefficient, while its square (FAM-Square) has a negative value (at $p < 0.01$). These findings suggest a nonlinear relationship between family share ownership and the management of earnings practices. At low ownership levels, family owners have less power to control management actions and, thus, increase the magnitude

Table 7. Nonlinearities between family ownership and earnings management

Variables	Coef.	t-stat
(Constant)		3.232*
FAM	1.115	3.700*
FAM-Square	-1.371	-3.915*
ALTMAN	-0.033	-2.468*
BIND	0.066	1.215
BMEET	0.004	2.858*
AUDCOM	-0.094	-1.602**
BIG4	-0.066	-5.471*
ROA	0.002	2.668*
AGE	0.001	-1.304
Year dummies		Yes
Industry dummies		Yes
Summary		
Adjusted R ²		0.280
F-statistic		8.957*
Inflection point		0.406
Observations		185

Note: * and ** indicate significance at 1% and 5% levels, respectively.

of earnings management. The inflection point is 40.6%. If family equity increase beyond this cut-off point, family owners achieve excessive power to control management activities, causing a lower level of earnings management. In summary, the

quality of earnings declines as family ownership up to the inflection point. However, when family equity rises above this ownership threshold, family businesses begin to generate higher-quality earnings.

CONCLUSION

The paper mainly explores whether family-controlled and financially healthy firms practice earnings management and, thus, reduce earnings quality. Using a sample of 82 non-financial companies listed on the IDX from 2017–2019, the study documents a significant negative association between family ownership and earnings management. This finding infers that family-controlled businesses are less likely to manage their earnings. The study also shows that financially healthy businesses tend to practice earnings management less. In other words, the result documents that companies without a propensity to experience financial issues exhibit lower levels of earnings management.

In conclusion, the study's main findings indicate that family-controlled and financially healthy businesses report higher-quality earnings. Additionally, this study finds that the impact of the family executive members on the earnings management measure is positive and statistically significant. The result infers that the involvement of family members in the management or executives leads to lower financial reporting quality. Finally, the study indicates a nonlinear association between family share ownership and the management of earnings behavior. In the first stage (up to a 40.6% ownership concentration), the increased family equity causes earnings quality to decline. Still, family businesses begin to report higher-quality earnings as family ownership exceeds this cut-off point of ownership.

The findings of this paper have implications for policymakers who appear to control the ownership of company shares by the family members as such matters might reduce the practices of earnings management. The study argues this concern can be inappropriate due to families' limited ability to maximize control within the firm, which could provide limited benefits.

AUTHOR CONTRIBUTIONS

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REFERENCES

1. Ali, Chen, T. Y., & Radhakrishnan, S. (2007). Corporate disclosures by family firms. *Journal of Accounting and Economics*, 44, 238-286. <https://doi.org/10.1016/j.jac-eco.2007.01.006>
2. Al-Shaer, H., & Salama, A. (2015). Audit committee and financial reporting quality: Evidence from UK environmental accounting disclosures. *Journal of Applied Accounting Research*, 18(1), 2-21. <https://doi.org/10.1108/JAAR-10-2014-0114>
3. Altman, E. I. (1993). *Corporate financial distress and bankruptcy* (2nd ed.). New York: John Wiley & Sons.
4. Anderson, R. C., & Reeb, D. M. (2003). Founding family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance*, 61(3), 1301-1328. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=365260
5. Anderson, R. C., Mansi, S. A., & Reeb, D. M. (2003). Founding family ownership and the agency cost of debt. *Journal of Financial Economics*, 68, 263-285. [https://doi.org/10.1016/S0304-405X\(03\)00067-9](https://doi.org/10.1016/S0304-405X(03)00067-9)
6. Andres, C. (2008). Large shareholders and firm performance- An empirical examination of founding-family ownership. *Journal of Corporate Finance*, 14(4), 431-445. <https://doi.org/10.1016/j.jcorp-fin.2008.05.003>
7. Arora, P., & Dharwadkar, R. (2011). Corporate governance and corporate social responsibility (CSR): The moderating roles of attainment discrepancy and organization slack. *Corporate Governance*, 19(2), 136-152. <https://doi.org/10.1111/j.1467-8683.2010.00843.x>
8. Atik, A. (2009). Detecting income-smoothing behaviors of Turkish listed companies through empirical tests using discretionary accounting changes. *Critical Perspectives on Accounting*, 20, 591-613. <https://doi.org/10.1016/j.cpa.2008.01.003>
9. Campa, D., & Camacho-Minano, M. (2015). The impact of SME's pre-bankruptcy financial distress on earnings management tools. *International Review of Financial Analysis*, 42, 222-234. <https://doi.org/10.1016/j.irfa.2015.07.004>
10. Carcello, J. V., & Neal, T. L. (2000). Audit committee composition and auditor reporting. *The Accounting Review*, 75(4), 453-467. <https://doi.org/10.2308/accr.2000.75.4.453>
11. Casillas, J. C., Moreno-Menendez, A. M., Barbero, J. L., & Clinton, E. (2019). Retrenchment strategies and family involvement: The role of survival risk. *Family Business Review*, 32(1), 58-75. <https://doi.org/10.1177/0894486518794605>
12. Chaney, P. K., Faccio, M., & Parsley, D. (2011). The quality of accounting information in politically connected firms. *Journal of Accounting and Economics*, 51, 58-76. <https://doi.org/10.1016/j.jaccco.2010.07.003>
13. Chi, C. W., Hung, K., Cheng, H. W., & Lieu, P. T. (2015). Family firms and earnings management in Taiwan: Influence of corporate governance. *International Review of Economics and Finance*, 36, 88-98. <https://doi.org/10.1016/j.iref.2014.11.009>
14. Claessens, S., Fan, J. P. H., & Lang, L. H. P. (2006). The benefits and costs of group affiliation: Evidence from East Asia. *Emerging Markets Review*, 7(1), 1-26. <https://doi.org/10.1016/j.ememar.2005.08.001>
15. Cooper, D. R., & Schindler, P. S. (2003). *Business research methods* (8th ed.). Boston, U.S.: McGraw-Hill, Irwin.
16. Craig, R., & Diga, J. G. (1998). Corporate accounting disclosure in ASEAN. *Journal of International Financial Management and Accounting* 9(3), 246-274. <https://doi.org/10.1111/1467-646X.00039>
17. Davids, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22, 20-47. <https://doi.org/10.2307/259223>
18. Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93, 1155-1177. https://www.uts.edu.au/sites/default/files/ADG_Cons2015_Demsetz%20Lehn%20PE%201985.pdf
19. Dichev, I. D., & Skinner, D. J. (2002). Large sample evidence on the debt covenant hypothesis. *Journal of Accounting Research*, 40(4), 1091-1123. <https://doi.org/10.1111/1475-679X.00083>
20. Faccio, M., Lang, L. H. P., & Young, L. (2001). Dividends and

- expropriation. *American Economic Review*, 91, 54-78. <https://www.aeaweb.org/articles?id=10.1257/aer.91.1.54>
21. Filip, A., & Raffournier, B. (2014). Financial crisis and earnings management: The European evidence. *The International Journal of Accounting*, 49, 455-478. <https://doi.org/10.1016/j.intacc.2014.10.004>
 22. Francis, B., Hasan, I., & Li, L. (2016). A cross-countries study of legal-system strength and real earnings management. *Journal of Accounting and Public Policy*, 35, 417-512. <https://doi.org/10.1016/j.jaccpub-pol.2016.06.004>
 23. Frankel, R. M., Johnson, M. F., & Nelson, M. W. (2002). The relation between auditors' fees for non-audit services and earnings management. *The Accounting Review*, 77(Supplement), 71-105. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=296557
 24. Franz, D. R., HassabElnaby, H. R., & Lobo, G. J. (2014). Impact of proximity to debt covenant violation on earnings management. *Review of Accounting Studies*, 19, 473-505. <https://link.springer.com/article/10.1007/s11142-013-9252-9>
 25. GlobeAsia. (2019). *Family businesses: Maintaining relevance in the modern era* (July ed.). Jakarta.
 26. Gul, F. A., Fung, S. Y. K., & Jaggi, B. (2009). Earnings quality: Some evidence on the role of auditor tenure and auditors' industry expertise. *Journal of Accounting and Economics*, 47(3), 265-287. <https://doi.org/10.1016/j.jacc.2009.03.001>
 27. Iatridis, G. E., & Kadorinis, G. (2009). Earnings management and firm financial motives: A financial investigation of UK listed firms. *International Review of Financial Analysis*, 18(4), 164-173. <https://doi.org/10.1016/j.irfa.2009.06.001>
 28. Jackson, S. B., & Pitman, M. K. (2001). Auditors and earnings management. *The CPA Journal*, 71(7), 38-44.
 29. Jaggi, B., & Tsui, J. S. L. (1999). Determinants of audit report lag: Further evidence from Hong Kong. *Accounting and Business Research*, 30(1), 17-28. <https://doi.org/10.1080/00014788.1999.9728921>
 30. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
 31. Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 29(2), 193-228. <https://doi.org/10.2307/2491047>
 32. Joni, J., Ahmed, K., & Hamilton, J. (2020a). Politically connected boards, family and business group affiliations, and cost of capital: Evidence from Indonesia. *The British Accounting Review*, 52(3), 100878. <https://doi.org/10.1016/j.bar.2019.100878>
 33. Joni, J., Ahmed, K., & Hamilton, J. (2020b). Politically connected boards, family business groups and firm performance: Evidence from Indonesia. *Journal of Accounting & Organizational Change*, 16(1), 93-121. <https://doi.org/10.1108/JAOC-09-2019-0091>
 34. Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance-matched discretionary accrual measures. *Journal of Accounting and Economics*, 39(1), 163-197. <https://doi.org/10.1016/j.jacceco.2004.11.002>
 35. Martinez-Ferrero, J., Lozano, M. B., & Vivas, M. (2020). The impact of board cultural diversity on a firm's commitment toward the sustainability issues of emerging countries: The mediating effect of a CSR committee. *Corporate Social Responsibility and Environmental Management*, 28(2), 675-685. <https://doi.org/10.1002/csr.2080>
 36. Mousavi, M. M., Quenniche, J., & Xu, B. (2015). Performance evaluation of bankruptcy prediction models: An orientation-free super-efficiency Dea-based framework. *International Review of Financial Analysis*, 42, 64-75. <https://doi.org/10.1016/j.irfa.2015.01.006>
 37. Moyer, S. E. (1990). Capital adequacy ratio regulations and accounting choices in commercial banks. *Journal of Accounting and Economics*, 13(2), 123-154. [https://doi.org/10.1016/0165-4101\(90\)90027-2](https://doi.org/10.1016/0165-4101(90)90027-2)
 38. Mselmi, N., Lahiani, A., & Hamza, T. (2017). Financial distress prediction: The case of French small and medium-size firms. *International Review of Financial Analysis*, 50, 67-80. <https://doi.org/10.1016/j.irfa.2017.02.004>
 39. Prencipe, A., & Bar-Yosef. (2011). Corporate governance and earning management in family-controlled companies *Journal of Accounting, Auditing and Finance*, 26, 119-227. Retrieved from <https://journals.sagepub.com/doi/10.1177/0148558X11401212>
 40. PriceWaterhouseCoopers. (2018). *Family business survey 2018: Indonesia report*. Retrieved from <https://www.pwc.com/id/en/epc/fbs-2018-indonesia.pdf>
 41. Salehi, M., Hoshmand, M., & Ranjbar, R. H. (2019). The effect of earnings management on the reputation of family and non-family firms. *Journal of Family Business Management*, 10(2), 128-143. <https://doi.org/10.1108/JFBM-12-2018-0060>
 42. Salvato, C., & Moores, K. (2010). Research on accounting in family firms: Past accomplishments and future challenges. *Family Business Review*, 23(3), 193-215. Retrieved from <https://journals.sagepub.com/doi/10.1177/0894486510375069>
 43. Tinoco, M. H., & Wilson, N. (2013). Financial distress and bankruptcy prediction among listed companies using accounting, market and macroeconomic variables. *International Review of Financial Analysis*, 30, 394-419. <https://doi.org/10.1016/j.irfa.2013.02.013>
 44. Wang, D. (2006). Founding family ownership and earnings quality. *Journal of Accounting Research*, 44(3), 619-656. <https://doi.org/10.1111/j.1475-679X.2006.00213.x>
 45. Zmijewski, M. E. (1984). Methodological issues related to the estimation of financial distress prediction models. *Journal of Accounting Research*, 22 (Supplement), 59-82. <https://doi.org/10.2307/2490859>