

Corporate Governance, Firm Size, and Earning Management: Evidence in Indonesia Stock Exchange

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Abstract: Purpose – The purpose of this paper is to evaluate the impact of the corporate governance regulations implementation and firm size on the earning management for food and beverages companies in Indonesian Stock Exchange.

Design/methodology/approach – The multiple regression is utilized to test this relationship at 95% confidence. Corporate governance was proxied by board of director, audit quality, and board independence. Firm size was represented by natural logarithm of total assets. Earning management was measured by Jones model with discretionary accruals.

Findings – Using data from the year 2005 annual reports of 51 food and beverages listed companies, including the composite index, the results showed that two of the corporate governance variables, namely board of director and audit quality, as well as firm size are statistically significant in explaining earning management measured by discretionary accruals.

Research limitations/implications – The regulations on corporate governance were implemented in 2005, but not all of food and beverages listed companies implemented the regulations in 2005.

Practical implications – An implication of this finding is that regulatory efforts initiated after the 1997 financial crisis to enhance corporate transparency and accountability did not appear to result on better corporate performance.

Originality/value – This is one of the few studies which investigates the impact of regulatory actions on corporate governance on earning management immediately after its implementation.

Keywords Corporate governance, Firm size, Earning Management

Paper type Research paper

I. Introduction

Agency conflicts are expected to be higher in widely held companies due to divergence of interest among contracting parties (Jensen and Meckling, 1976). One such conflict may arise between inside owner-managers and outside minority shareholders. Fama and Jensen (1983) argue that the existence of independent directors would result in a more effective monitoring of the board and limit managerial opportunism. That is because independent directors are supposed to look after the interests of outside minority shareholders. Thus, to reduce agency conflicts, independent directors can be appointed to the board. Following this line of argument, if independent directors succeed in discharging their monitoring role and ensuring that the board makes decision in the best interests of all shareholders, opportunistic behavior could be avoided; hence, company performance should improve.

Another characteristic that is seen to influence a board's ability to monitor is board size. Boards can become less effective in controlling management as board size increases due to problems of coordination and communication (Jensen, 1993). Nevertheless, results regarding the effect of board size on earnings management are not so obvious. Some authors find a positive association between board size and earnings management (Chin, Firth, and Rui [2006] for 313 firms in Hong Kong), and others a negative relation (Xie, Wallace, and Dada [2003] for a sample of 110 US firms) or even no relation (Bradbury et al. [2006] for firms in Malaysia and Singapore).

Another important characteristic of boards is whether the roles of the chairperson and the chief executive officer (CEO) are vested in different people. Corporate governance guidelines assume that a board is less able to perform a monitoring role when the CEO is also the chairperson of the board. *CEO duality* indicates that less control is likely to be exercised over management's activities and behavior. Empirical evidence on the association between CEO duality and opportunistic managerial behavior, however, seems not to support this theory since most authors do not find any significant relation (Bugshan, 2005; Cornett, Marcus, Saunders, & Tehranian, 2006; Davidson et al., 2005). In monitoring the financial discretion of management, it is the audit committee that is likely to provide shareholders with the most protection in maintaining the credibility of a firm's financial statements. Thus, independent audit committees can potentially improve the quality and credibility of financial reporting. The best practice standard establishes 100 percent of independent directors; and, though in most studies the percentage of independent directors is higher than 50 percent, it does not reach 100

percent. On the contrary, in the samples of Yang and Krishnan (2005) for US and Bugshan (2005) for Australia there are 82 percent of independent directors in the audit committee, in García-Osma and Gill de Albornoz (2007) for Spain the mean is 56 percent. Nevertheless, results in this area are also conflicting. While Klein (2002) reports a negative relation between earnings management and audit committee independence, other authors find no association between both variables (Yang and Krishnan [2005] in the USA, and García-Osma and Gill de Albornoz [2007] in Spain).

Development of Hypotheses

Firm Size

Firm Size is defined as the natural log (ln) of total assets (Chen et al., 2005; Ghazali, 2010; Hasan and Ahmed, 2012). It is used in this study to control the likely impact of firm size on the discretionary accruals of the sample firms. It is argued that the larger firm size means the higher the expected agency problem that the firm is likely to experience (Abed et al., 2012); furthermore, given the fact that large firms have more resources and earn higher profit, Grey and Clarke (2004) note that those firms are more likely to avoid managing earnings through discretionary accruals. Quite a number of studies control for firm size including Zhu and Tian (2009) and Shehu (2011).

The effect of firm size on earnings management is controversial (Kouki et al., 2011). We have two opposite points of view: (1) the first defended by Lennox (1999), Gore et al. (2001), Klein (2002), Xie et al. (2003), Abdul Rahman and Ali (2006) advanced a negative relationship; larger firms with sophisticated internal control systems, more competent auditors (Big5) and have better reputation; are more able to avoid earnings management. This supports the idea that smaller companies are subject to less control from authority and therefore, managers are more likely to engage in earnings management activities (Abed et al., 2012); (2) the opposite view suggests a positive relation between size and earnings management; larger companies with more capital market pressure, more bargaining power; are more likely to manage earnings than are their counterparts of small firms (Moses, 1987; Myers and Skinner, 2000; Nelson et al., 2002). A negative association between firm size and earnings management is hypothesized:

H₁. There is a significant negative between firm size and earnings management.

Corporate Governance

Corporate governance is represented by board of director, audit quality, and board independence.

Board of Director. Boards of directors can play a significant role in controlling agency problems (García-Meca and Sances-Balesta, 2009). From an agency perspective, the ability of the board to act as an effective monitoring mechanism depends on its independence of management (Beasley, 1996; Dechow et al., 1996). According to Fama and Jensen (1983), independent directors on boards make boards more effective in monitoring managers and exercising control on behalf of shareholders. Dalton et al. (1999) showed that larger board members provide more advantages for their companies through sharing alternative experience which might decrease the incidence of earnings management. Previous studies have used board size as a determinant of earnings management, but the influence of board of director has received mixed results in previous studies. Abdul Rahman and Ali (2006) found a positive relation between earnings management and board of director. However, Xie et al. (2003) and Peasnell et al. (2005) found a negative association between earnings management and board of director. Interestingly, Abbott et al. (2000) found no relation between quality of earnings and board of director. Thus, based on agency theory, it can be hypothesized that:

H₂: There is a significant positive relationship between board of director and earnings management.

Board Independence. The effect of board independence on earnings management is not so specific in the description of board independence, which is usually referred to non-executive directors. This limits the analysis of board independence to the category of non-executive directors, and restricts the possibility of a deeper examination of how these different roles may constrain managerial discretionary behavior (García-Meca and Sances-Ballesta, 2009). Results on the association between earnings management and board independence in previous literature are conflicting. While Davidson, Goodwin-Stewart, and Kent (2005) find empirical support for the effective role of independent directors in constraining earnings management in Australian firms; Bradbury, Mark, and Tan (2006) in Singapore fail to find any association between earnings management and board independence. Board independence will be more aware of their responsibilities and would discharge those responsibilities more effectively. It is hypothesized that the higher the proportion of board independence on the board the better will not be the earnings management:

H₃. There is a significant negative between board independence and earnings management.

Audit Quality. Audit quality on audit committee plays an important role in monitoring management to protect shareholders' interest (Hasan and Ahmed, 2012). The code of best governance practice in Nigeria requires that

the committee should be largely independent, highly competent and possess high level of integrity. It is responsible for the review of the integrity of financial reporting and oversees the independence and objectivity of the external auditors (Hasan and Ahmed, 2012). Audit committee has been explored in prior literature and how it relates to earnings management using various constructs of audit committee effectiveness such as size of the board (Yermack, 1996; Xie et al., 2001), composition and independence (Klein, 2002), audit committee meetings (Beasley et al., 2000), financial expertise of committee members (Kalbers and Fogarty, 1993), and financial motivation of independent directors (Chtourou, Bedard and Croteau., 2001). In the existing literature, (Hassan, 2011) observed that more attention has been given to financial expertise as a construct of board competence. This, he observed, could be misleading as accounting expertise is much more relevant to the board members in the discharge of their duties as a monitoring mechanism.

Audit quality measured with dummy variable, which the companies are audited by Big 4 (public accountant office or large KAP) then it is the high-quality audits and if audited by non Big4 (small KAP), it is the low audit quality (Sirat, 2012). KAP Big 4 in Indonesia (Susiana and Herawaty, 2007) are (1) Price Water House Coopers (PWC), with Indonesian partner are Haryanto Sahari dan Rekan; (2) Deloitte Touche Tohmatsu, with Indonesian partner are Osman, Ramli, Satrio dan Rekan; (3) Klynveld Peat Marwick Goerdeler (KPMG) International, with Indonesian partner are Siddharta and Widjaja; (4) Ernst and Young (EY), with Indonesian partner are Prasetyo, Sarwokodan Sandjaja. Thus, based on KAP Big 4, it can be hypothesized that:

H₄: There is a significant negative relationship between board of director and earnings management.

Dependent Variable Earning Management

Earning management in this study is measured using accounting accruals approach. Accruals are likely to capture evidence of earnings management because they reflect managers' accounting estimation and accounting choices (Chen et al, 2005). Dechow et al. (1995) provide evidence that the modified Jones model is the most powerful model to detect earnings management among the alternative models to measure unexpected accruals. Therefore, a cross-sectional modified Jones model is used. However, a drawback of the modified Jones model commonly used to measure earnings management is that it does so with measurement error (Kothari et al. 2005). To address this concern, we include prior period ROA measured as net income divided by total assets as a performance measure in the model. The discretionary accruals are estimated as follows. Total accruals are measured as net income minus cash flows from operation.

Then discretionary accruals, a proxy for earnings management, are estimated by subtracting nondiscretionary accruals from total accruals, where all accrual variables are scaled by lagged total assets to control for potential scale bias (Chen et al, 2005). Normal levels of working capital accruals related to sales are controlled through the changes in revenue adjusted for changes in accounts receivable.

$$TA_{i,t} = NI_{i,t} - CFO_{i,t} \tag{1}$$

Normal levels of depreciation expense and related deferred tax accruals are controlled through the property, plant, and equipment. Lagged ROA_{i,t-1} is added as suggested by Kothari et al. (2005). Finally, the residual (*ε_{i,t}*) from the regression is the discretionary accruals (Chen et al, 2005).

$$\frac{TA_{i,t}}{A_{i,t-1}} = \alpha_1 \left(\frac{1}{A_{i,t-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} \right) + \alpha_3 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) + \alpha_4 ROA_{o,t-1} + \epsilon_{i,t} \tag{2}$$

$$\frac{NDA_{i,t}}{A_{i,t-1}} = \hat{\alpha}_1 \left(\frac{1}{A_{i,t-1}} \right) + \hat{\alpha}_2 \left[\frac{(\Delta REV_{i,t} - \Delta REC_{i,t})}{A_{i,t-1}} \right] + \hat{\alpha}_3 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) + \hat{\alpha}_4 ROA_{i,t-1} \tag{3}$$

$$\frac{DA_{i,t}}{A_{i,t-1}} = \frac{TA_{i,t}}{A_{i,t-1}} - \left\{ \hat{\alpha}_1 \left(\frac{1}{A_{i,t-1}} \right) + \hat{\alpha}_2 \left[\frac{(\Delta REV_{i,t} - \Delta REC_{i,t})}{A_{i,t-1}} \right] + \hat{\alpha}_3 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) + \hat{\alpha}_4 ROA_{i,t-1} \right\} \tag{4}$$

where:

- TA_{i,t} = total accruals for company i in year t, defined as above.
- NI_{i,t} = net income before discontinued segments and extraordinary items.
- CFO_{i,t} = cash flow from operation
- ΔREV_{i,t} = change in revenue for company i in year t
- ΔREC_{i,t} = change in receivables for company i in year t.
- PPE_{i,t} = net property, plant, and equipment for company i in year t.
- ROA_{i,t-1} = return on assets for company i in year t.
- A_{i,t-1} = total assets for company i in year t.
- NDA_{i,t} = nondiscretionary accruals for company i in year t.

DA_{i,t} = discretionary accruals for company i in year t.
 ε_{i,t} = residual for company i in year t.

This study is subject to a number of limitations. First, our results demonstrate an association, instead of causation, between corporate governance characteristics and the likelihood of earnings management. Second, we use the popular cross-sectional modified Jones model to estimate discretionary accruals. We incorporate lagged ROAs as an additional factor to control for firm performance (Chen et al, 2005). Due to data limitations, we do not use performance-matched discretionary accruals as suggested by Kothari et al. (2005). Therefore, our results may still be subject to the potential concerns of measurement error. Third, we only include the corporate governance characteristics (i.e., independence and financial expertise) required by the Principles, and governance expertise and voluntary formation of independent directors and supervisors to test our hypotheses (Chen et al, 2005).

II. Research Method

The data for this study were collected from 2005 until 2007 annual reports of food and beverages listed companies. The annual reports were downloaded from the Indonesia Stocks Exchange’s official website (www.idx.or.id). Companies chosen for analysis were those included in the composite index. Companies included in the composite index are generally actively traded and large in size. Given their high volume of trade, it is thus appropriate to assume that these are the companies that more readily attract the interest of investors. Consequently, it may be expected that these companies would apply good corporate governance practices. With the exception of 51 companies, all other 57 food and beverages listed companies in the composite index were included in the analysis.

The multiple regression was used to analyze the impact of the implementation of corporate governance regulations and firm size on earning management. The formulation of the multiple regression model is as follows:

$$DisAcc = \beta_0 + \beta_1 FirSiz + \beta_2 BoaDir + \beta_3 BoaInd + \beta_4 AudQua + \epsilon$$

Table 1 shows operation of all variables included in the analysis.

Table 1. Variable included in the regression analysis

Variable	Definition
DisAcc	Earning management measured by discretionary accruals.
β ₀β ₄	Regression coefficient
FirSiz	Firm Size measured by natural logarithm of total assets
BoaDir	Board of Director is the number of directors on the boards.
BoaInd	Board Independence is number of independent commission.
AudQua	Audit Quality, is dummy variable, 1 if audited by KAP Big 4; 0 otherwise

Findings and Analysis

Descriptive statistics

Table 2 shows descriptive statistics of all variables. Panel (a) of Table 1 shows that discretionary accruals which shows between -0.45 and 0.34. This shows that food and beverages listed company make earning management on their operation. Firm size which shows between 20.99 and 30.42, that the larger firm size the higher the expected agency problem that the firm is likely to experience. Board of director in the companies investigated was as high as 10 with a mean of 4.96 (5). Directors on boards make boards more effective in monitoring managers and exercising control on behalf of shareholders. Board independence was as high as 0.57 with a mean of 0.33. The higher the proportion of board independence on the board the better will not be the earning management.

Panel (b) of Table 1 shows that 51 percent of the sample companies audited by KAP non Big 4. The companies are audited by KAP Big 4 is the high-quality audits and if audited by KAP non Big 4 is the low audit quality.

Table 2. Descriptive Statistics of Variables

<i>Panel a.</i>				
<i>Continuous Variabels</i>				
Variables	Label	Min	Max	Mean
Discretionary Accruals	DisAcc	-0.45	0.34	-0.16
Firm Size	FirSiz	20.99	30.42	27.23
Board of Director	BoaDir	3	10	4.96
Board Independence	BoaInd	0.20	0.57	0.33

Panel b.

Categorical Variables

Audit Quality	AudQua	1 = audited by KAP Big 4 25 (49%)	0 = audited by KAP non Big 4 26 (51%)
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To determine the association between the implementation of corporate governance regulations and firm size on earning management, a multiple regression analysis employing four independent variables was carried out. Table 3 shows the results of the regression analysis. It can be seen from Table 3 that the regression model which incorporates four independent variables results in an adjusted R² of 25.4 percent. This means that the four variables tested were able to explain 25.4 percent of the variation in earning management among Indonesia food and beverages listed companies investigated in this study. The results showed that two of the corporate governance variables, namely board of director and audit quality, with firm size was statistically significant in explaining earning management measured by discretionary accruals. Corporate governance namely board of director were positive, and audit quality were negative associated with earning management. Firm size was negative associated with earning management.

Board of director was statistically significant at the 1 percent level. Consistent with the expectation, companies with a larger proportion of board director were found to be more make operation with earning management. Firm size and audit quality were statistically significant at the 10 percent level. As hypothesized, companies in which the larger companies and more qualified auditor tend to obey earning management.

Table 3. Standard Multiple Regression Result

Adjusted R ²	25,4				
F-statistics	5,253				
Significance	0,001				
Variables	β	t-value	Significance	Tolerance	VIF
Constant	0,489	1,454	0,153		
FirSiz	-2,65E-02	-2,102	0,041*	0,872	1,146
BoaDir	4,707E-02	4,440	0,000**	0,759	1,317
AudQua	-9,53E-02	-2,059	0,045*	0,643	1,556
BoaInd	-0,357	-1,151	0,256	0,733	1,364

Note: Coefficient are shown as significant at: *5 or **1 percent level

III. Conclusions And Suggestions For Future Research

This paper has examined the impact of corporate governance on corporate performance. The results showed weak evidence to indicate that companies which adopted good governance practices performed better than others. None of the corporate governance variables were statistically significant in explaining corporate performance. This finding could be partially due to the time period under examination. The regulations on corporate governance were implemented in 2001; perhaps it was too early to analyze results for the financial year 2001 as regulatory changes may take a few years before they can be expected to show positive or intended results. Nonetheless, one may still question the relevance and effectiveness of the Code as even though the regulations came about in 2001, the market knew about the efforts long before the introduction, as evidenced in the 1998 survey. A possible explanation for this finding could be that perhaps the Code which is based on the Hampel Report in the UK is not suitable in the Malaysian context due to different political and cultural factors affecting business environment. Another possible factor influencing corporate governance effectiveness could be the legal environment of a country. Malaysia has a low litigious environment as opposed to the USA and UK where shareholder protection is very good (La Porta et al., 1999). That may have some bearing on incentives to comply with regulatory requirements.

Future research on corporate governance and corporate performance could consider the above factors when planning their research design. Analyzing data which are not too close to the year of implementation of corporate governance guidelines may provide better insight into the impact of corporate governance on corporate performance. Additionally, a different methodology such as interviewing market participants can be undertaken to gather industry views on issues related to corporate governance. Interviews may shed some light on the effectiveness of board independence. Findings from the interviews could provide fruitful suggestions on how best to design a corporate governance regime for each/different business setting(s) to ensure realization of long-term stakeholders' value.

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