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Do the effective board and the audit committee influence the earnings management?

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Abstract
This study investigates whether the corporate governance mechanism has a relationship with earnings management of the listed firms in Sri Lanka. In particular, board size, board independence, CEO duality, audit committee size and audit committee independence represent the corporate governance mechanisms. In addition, three control variables have been employed in this study; firm size, firm growth and financial leverage. Data were obtained using content analysis on the annual reports of top 60 non-financial firms listed in the Colombo Stock Exchange. The earnings management is measured by the discretionary accruals based on the Modified Jones Model. The result of this study reveals that the CEO duality is the only one variable which has a significant negative relationship with earnings management. Therefore, the findings show that the CEO duality can provide effective monitoring on earnings management in Sri Lanka. But board size, board independence, and audit committee size and audit committee independence have insignificant relationship with earnings management in Sri Lankan firms. However, there is significant relationship between earnings management and leverage and firm growth. According to these findings, improving good governance and CEO Duality is important to avoid earnings management in Sri Lankan firms.

Keywords: *Audit committee, Board size, Corporate governance, Earnings management*

1. Introduction

In current business structure, it is necessary to separate ownership from management and any effective supervisory mechanism on management. Therefore, such organizations increase probability of inefficient allocation of resource, expand organization problems, lead to issue misleading financial reports and lead managers to manipulate earnings in order to maximize their own interest. Therefore, there has been a movement towards developing and implementing some mechanisms to struggle against the opportunistic behaviors that provide reliable financial information. In accounting and financial practices, the manipulation is called earning management. Nature of earnings management provides the opportunity to managers to manipulate the financial information of the firm in order to get their own benefit and to protect the rights of the stakeholders. Therefore, organizations have to develop an effective mechanism to control the asymmetry of financial information. In recent years, the wide consideration given to corporate governance issues suggests that stronger governance mechanisms would reduce opportunistic management behaviors, thus improving the quality and reliability of earnings management. Corporate governance is also likely to improve investors' perception of the reliability of firm's performance as measured by the earnings, in situation of earnings management. Therefore, the corporate governance value is relevant when earnings management exists.

1.1 Background of the study

Financial reports are the most important output of an accounting system. The objective of financial reporting is to provide the information to interested parties to get their business decisions. The financial information is the first source of independent and true communication about the performance of company managers (Sloan, 2001). The integrity of financial reporting is highly dependent on the performance and conduct of those involved in the financial reporting systems, particularly directors, management and auditors (Mohd, Rahaman & Mahenthiran, 2008). The most significant accounting item presented in financial reports is the earnings which are considered as a key factor in determining the dividend policy, a guideline for investment and decision making, a core measure of a firm's performance, an effective criterion in the stock pricing and eventually an instrument utilized to make predictions (Mohammady, 2012).

Earning management can be defined as the adjustment of a firm's reported performance either to mislead some stakeholders or to influence contractual outcomes. On the other hand the act of managing earnings does not necessarily reflect the true performance of the organization, a situation that may contribute to shareholders and investors making inaccurate judgments about the company. Earnings management is more informative and trustworthy if they are followed by a good governing system.

Corporate governance is defined as the system by which corporations are directed and controlled (Cadbury, 1992). The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation such as the board, auditors, manager, shareholders and other stakeholders and includes the rules and procedures for making decision on corporate affairs. One of the most important of these devices is board of directors and audit committee. In fact, the board of directors and auditors are an important internal control mechanism designed to monitor the action of top management and monitoring the quality of the information contained in financial reports.

Specifically, the primary purpose of this study is to review the result of empirical studies of relationship between effective board and audit committee in respect of constraining earnings management. It has been argued that the firms with effective board and audit committee increase the credibility of the financial reports, the firm's value and are able to safeguard them from damaging their reputations and legal exposure, all of which promotes the shareholders' interests (Carcello & Neal, 2002). When market participants lack the ability to directly observe the reported earnings, they may expect the managers of the company in a powerful monitoring environment to engage less in earnings management. Therefore, the present study further argues that the firms that have strong monitoring mechanisms through effective board of directors and audit committee have a greater ability to constrain opportunistic earnings, hence reducing uncertainty in the reported earnings. The major focus of the study is to get an understanding that the presence of corporate governance mechanism is effective in controlling the earnings management nature in the Sri Lanka listed companies.

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By the evolution of today's modern business, many of the corporations have become owned and controlled by the management which involves delegating some decision making authority. Shareholders willingly entrust their resources with managers on the assurance that the managers will exercise their rights appropriately to increase shareholders' wealth and not misappropriate the shareholders assets. However, managerial discretion can also be used to engage in earnings management to hide poor performance or to overdraw good performance for their own benefits. In consequence, a strong corporate governance mechanism is employed to reduce the agency cost. The role of corporate governance is to reduce the divergence of interests between shareholders and managers (Solabomi & Uwuigbe, 2013). It is one of the most important determinants in ensuring the quality of the financial reporting process. The board of directors and audit committee are the two important and fundamental elements in corporate governance mechanism to enhance the quality of the financial statement and lead~~s~~ to restriction of the different practices of the earnings management phenomenon.

Board of directors is selected by common shareholders to manage the firm on behalf of these shareholders. In other words, the board represents all shareholders in managing the firm. It sets the strategies, policies, plans, and procedures, which are supposed to ensure the best possible manner of management, to manage the earnings of the corporation.

Therefore, there is some relationship between board and audit committee characteristics and earnings management. When considering the Sri Lankan context no researches can be seen in relation to the earnings management practices in Sri Lanka. To fulfill that research gap, this research is based on "Board and audit committee characteristics and earnings management". The problem statement to be analyzed in this study is, "Do the effective board and the audit committee influence the earnings management?"

1.2 Research questions

- To what extent does board size affect earnings management?
- Does the number of independent directors have any relationship with earning management?
- What impact does CEO duality have on earnings management?
- What is the relationship between audit committee size and earnings management?
- Is there any relationship between audit committee independence and earnings management?

1.3 Research objectives

The main objective of this research is to investigate the influence of board and audit committee characteristics on earnings management.

Sub objectives are;

- To examine the relationship between independent directors and earnings management.
- To examine the impact of CEO duality on earnings management.
- To investigate the relationship between board size and earnings management.
- To investigate the relationship between audit committee size and earnings management.
- To examine the impact of audit committee independence on earnings management.

2. Literature review and hypotheses

Prior research in accounting literatures has looked at the relationship between different corporate governance variables and earnings management, the vast majority of these prior literatures have basically focused on the board of directors' characteristics and audit committee characteristics as proxy for corporate governance variables. These variables are: size of the board, board independence, CEO duality, audit committee size and audit committee independence.

Different scholars have concluded different ideas regarding board size and earnings management as they have used different kind of samples to test. And also different kinds of tools are used to measure their variables. Basically previous researchers have identified negative relationship between board size and earnings management (Mohamed & Aiman, 2013; Xie, Davidson & DaDalt, 2003) and others positive relationship between earnings management and board size (Leila & Naser, 2011). Therefore, it can be hypothesized that;

Hypothesis 01: There is a significant relationship between board size and earnings management.

Previous studies show conflicting result of relationship between board independence and earnings management. Hashim and Devi (2008) find out positive significant relationship between board independence and earnings management. Peasnell, Pope and Young (2000) find evidence of a significant negative relationship between earnings management and the proportion of non-executive board members. Then, it can be hypothesized that:

Hypothesis 02: There is a significant relationship between earnings management and board independence.

Further, another important characteristic of board is CEO Duality. Gulzer and Wang (2011) state that, "in CEO duality, the CEO of the firm wears two hats, a chairperson of the board of director hat and a CEO hat." Klein (2002) conducted a research and indicates that discretionary accrual is positively related to the CEO duality. Murhadi (2009) investigated the role of good corporate governance in reducing earnings management. His findings indicate that a higher rate of duality is associated with high earnings management practices. Core, Holthausen and Larcker (1999) find out that CEO compensation is lower when the CEO and board chair positions are separate. Thus, Hypothesis is developed as follows:

Hypothesis 03: There is a significant relationship between earnings management and role duality.

The size of audit committee is referred to as the number of directors appointed to be members in the audit committee, in this regard there could be small, medium and large audit committees. Yang and Krishnan (2005) found that quarterly earnings management is lower for the firms that have large size of audit committee. A negative significant relationship was found between the size of audit committee and earnings management practices for banking companies in Indonesia and positive relationship was found in China according to the findings of Euphrasia and Dini (2013). Thus the following hypothesis is proposed:

Hypothesis 04: There is a significant relationship between audit committee size and earnings management.

It is generally believed that an independent audit committee provides effective monitoring of the financial discretion of management and in ensuring the credibility of the financial statements. Klein (2002) has found a negative link between discretionary accruals and the audit committee independence. According to Piot and Janin (2007), through this empirical evidence, a significant negative association between independence audit committee and earnings management can be predicted. Therefore:

Hypothesis 05: There is a significant relationship between the independent audit committee and earnings management.

3. Research methodology

The population of this study comprises only non-financial firms listed on the CSE due to difference of governance mechanism in the banking and insurance sector other than the non-financial sector. After excluding companies from finance industries and companies in which information was insufficient, the final sample was selected of top 60 nonfinancial public listed companies in Sri Lanka based on their market capitalization. Financial year 2016/2017 was selected as the sample period for this study. Because these annual reports were the latest and available and also corporate governance practices were recently effective in those years, since the corporate governance code was introduced in year 2013.

Based on the prior literature, it was observed that most powerful and frequently used model for evaluating accruals is modified Jones's model (Jones, 1991; Dechow *et al*. 1995). In this model discretionary accruals (abnormal accruals) were used as proxy for earnings management. Therefore, this study also used this model to measure the earnings management. Discretionary accruals in this study have computed by using the following procedures. First of all total accruals should be calculated.

$TA_{it} = NI_{it} - CFO_{it}$ Where:

TA_{it} is total accruals for company i in year t

NI_{it} is Net Income or Earnings before extraordinary items for company i in year t CFO_{it}

is Cash Flow from Operating activities for company i in year t

Then total accruals (TA_{it}) are regressed against its components (i.e. change in revenue and receivable and property, plant and equipment) using the modified Jones model to obtain parameter estimates. It can be calculated using the following model.

$$\frac{\text{TAit}}{\text{At}-1} = \beta 1\left(\frac{1}{\text{At}-1}\right) + \beta 2\left(\frac{\Delta\text{REVt} - \Delta\text{RECt}}{\text{At}-1}\right) + \beta 3\left(\frac{\text{PPEt}}{\text{At}-1}\right) + \varepsilon\text{it}$$

Thirdly, Non-discretionary accruals should be calculated. Coefficient estimates of □$_1$, □$_2$ and □$_3$ obtained from the above regression model are then used to calculate Nondiscretionary accruals. The residual which represents the firm specific discretionary accruals portion of total accruals in above equation. Non-discretionary accruals reflect the non-manipulated accounting accrual items because they are out of managers' control. It can be calculated using the following equation.

$$\text{NDAit} = \beta 1\left(\frac{1}{\text{At}-1}\right) + \beta 2\left(\frac{\Delta\text{REVt} - \Delta\text{RECt}}{\text{At}-1}\right) + \beta 3\left(\frac{\text{PPEt}}{\text{At}-1}\right)$$

Where:

NDA_{it} is Non-Discretionary Accruals

A_{t-1} is Total Assets at the end of year t-1

$\Delta\ REV_t$ is Revenues in year t less revenue in year t-1

$\Delta\ REC_t$ is Net receivables in year t less net receivable in year t-1

PPE_t is Gross property plant and equipment at the end of year t β_1,

β_2, β_3 is Firm specific parameters

Finally discretionary accruals have been calculated as a proxy for earnings management. It can be calculated using the following equation.

$$\mathrm{DAt} = \mathrm{TAt} - \mathrm{NDAt}$$

Where:

DA_t is Discretionary accruals in year t

The following table shows the summary of operationalization of each variable.

Table 1

Summary of the operationalization of variables

Test Variable	Abbreviation	Measurement
Dependent Variable		
Discretionary Accrual	DA	Discretionary Accruals are calculated by the Modified Jones Model
Independent Variables		
Board Size	BSIZ	Measured as total number of directors in the board
Board Independence	BIND	Measured by % of non-executive directors in the board
CEO Duality	DUA	Coded 1 if the firm has a CEO who is also serving as the chairman, 0 otherwise.
Audit Committee Size	ACS	Measured by % of non-executive directors in the board
Audit Committee Independence	ACI	Measured by % of audit committee members
Control Variables		

Return on Assets	ROA	Ratio of total debt to total assets
Leverage	LEV	Net Income before Extraordinary Items scaled by lagged total assets
Firm Size	FS	Natural Logarithm of Total Assets

4. Results and discussion

A summary of the descriptive statistics is presented in Table 2.

Table 2

Descriptive statistics

Variable	Minimum	Maximum	Mean	Std. Deviation
DA	-.1878	.5376	.007760	.1089867
BSIZ	5	14	8.18	1.882
BIND	.25	1.00	.6429	.21640
DUA	0	1	.17	.376
ACS	.25	1.00	.6392	.22091
ACI	.33	1.00	.7847	.19840
ROA	-.11	.56	.1072	.12598
LEV	.00	4.97	.2190	.64536
FS	13.21	18.55	16.1512	.91923
	Valid N = 60			

The magnitude of the discretionary accruals of the companies in the sample has a mean value of 0.007760 of total assets with the minimum value of -0.1878 and maximum value of 0.5376. It means that managers of firms tend to manage firm's earnings. Table 2 also indicates that the mean size of board in Sri Lankan firms is between eight and nine members with a minimum value of 5 to a maximum value of 14. In addition, the proportion of independent members on board is 64 percent of average of non-executive directors included in the board. So, selected sample firms in Sri Lanka tend to include more independent directors in their board. CEO duality is 17 percent of chairman of the board and general manager is the same person in the 60 sample companies. The mean size of the audit committee in Sri Lankan firms is 0.63 with minimum value 0.25 to maximum value of 1.00. It indicates that the proportion of audit committee members is 63 percent of non-executive directors. In addition, the proportion of independent members in audit committee is 78 percent of directors included in the audit committee. So, firms tend to include more independent directors in their audit committee.

Table 3 shows the multiple regression model results and model summary in order to measure the explanatory power of corporate governance variables (independent variables) against discretionary accruals (dependent variable).

Based on the findings, R^2 is 0.399 which reveals that about 39 percent of the variance in absolute Discretionary Accruals (DA), a measure of earnings management, has been significantly explained by the independent variables of BSIZ, BIND, DUA, ACS and ACI and also control variable of ROA, LEV and FS in the model. Thereby, it can be noted that the fitness of built model is relatively good. The remaining 61 percent of R^2 indicate there may be other corporate governance variables that are important in effecting earnings management that have not been considered in the study.

Table 3 shows the results of the regression analysis such as coefficients and p values of BSIZ, BIND, DUA, ACS, ACI, ROA, LEV and FS in model.

Table 3
Coefficients of the regression analysis & model summery

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Beta	Std. Error	Beta		
DA	.257	.238		1.080	.285
BSIZ	.004	.007	.065	.555	.581
BIND	.076	.078	.151	.979	.332
DUA	-.069	.033	-.239	-2.132	.038
ACS	-.008	.072	-.016	-.108	.914
ACI	-.069	.064	-.126	-1.088	.282
ROA	.461	.108	.533	4.267	.000
LEV	-.080	.020	-.472	-3.979	.000
FS	-.018	.014	-.152	-1.290	.203

Model summery

	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.63[a]	.399	.304	.0908951

a. Predictors: (Constant), FS, ACS, ACI, DUA, LEV, BSIZ, ROA, BIND

Table 3 shows that there is a significant negative relationship between CEO duality and the DA because there is a negative beta value (-.239) with significant p value of 038. And also this model shows a significant positive relationship between ROA and DA. This indicates that sample firms with strong performance are more likely to manage discretionary accruals. In the context of this study it has been found out there is negative highly significant relationship between leverage and discretionary accruals. It is obtained that highly leverage companies are less involved in earnings management.

5. Conclusion

This study investigates whether corporate governance mechanisms have an impact on the magnitude of earnings management among Sri Lankan firms. In particular, the study focuses on the size of the board, the proportion of independent directors in the board and CEO duality as the board characteristics, while audit committee size and audit committee independence represent the audit committee characteristics and attempt to assess whether these factors affect the earnings management practices in Sri Lankan context.

Earnings management of Sri Lankan listed companies is insignificant positively correlated to board size, that is, a smaller board is more efficient, because communication and coordination between board members is more convenient and more effective to influence on earnings management.

Earnings management of Sri Lankan firms has a positive relationship with board independence but insignificant. The more independent directors are in the board, the higher the earnings management is, because the independent directors are more inefficient in their functions. So the independent director in the board of Sri Lanka has not been effective in monitoring earnings management.

Earnings management has a significant negative relationship with the CEO Duality. It indicates that the CEO duality will reduce the level of earnings management of Sri Lankan listed firms because chairman is selected by all of shareholders to monitor the firm on behalf of them. In here the chairman is also the CEO who can effectively monitor the firm to ensure the interest of shareholders. Therefore, the higher CEO duality reduces the earnings management.

The initial findings of this study showed an insignificant negative relationship between earnings management and both audit committee size and audit committee independence.

In Sri Lankan firm size has negative impact on earnings management. It indicates that large firms have attracted directors with superior expertise and experience to manage the firm. Therefore, their level of earnings management is lower than small firms. There is a significant positive relationship between firm growth and earnings management in Sri Lankan firms. It indicates that high growth companies have more incentives for earnings management. Firm leverage is significantly negatively associated with earnings management, meaning that high leveraged firms do not lead managers to manage earnings. Therefore, the leverage and growth of firms are important significant determinants of earnings management in Sri Lankan firms.

This study is however limited to the sample and covers only one year data from the Colombo Stock Exchange. Also, only five corporate governance variables were considered in this study. However, future research could consider other corporate governance variables which are not considered in this study such as board ownership, board remuneration and audit committee meeting to enhance evidence on the association between the corporate governance mechanism and the earnings management.

Finally, future research can analyze the effect of corporate governance characteristics on earnings management and its relationship with firm value. It is important for potential investor to know the significant determinants of earnings management and their consequences on firm value.

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