

## IMPACT OF CORPORATE GOVERNANCE AND AUDIT QUALITY ON THE DEGREE OF EARNINGS MANAGEMENT: EVIDENCE FROM SRI LANKA

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### Abstract

Financial statements are the most important source of information which can be used to find out the company's earnings that is critical for investment decisions. Earnings management is a manipulation tool used by the managers when preparing the financial statements, and this has a significant impact on the decision made by the investors. The collapse of companies, which recorded extraordinary earnings growth in their audited financial statements created doubts over the quality of audit performed and the effectiveness of the corporate governance practices. This study examines the impact of corporate governance and audit quality on earnings management using quantitative research approach that analyses secondary data extracted from the audited financial statements of a sample of 41 listed non-financial companies for the period from 2016 to 2020. Correlation analysis and pooled ordinary least square regression are used to analyze the data and that analysis reveals that corporate governance mechanisms significantly impact the degree of earnings management in Sri Lanka, while audit quality does not show a significant relationship with earnings management. Audit committee size, CEO duality and board independence are negatively and significantly associated with discretionary accruals, while board size shows an insignificant but positive relationship. Both of the proxies of audit quality (audit firm size and audit fees) show an insignificant relationship with discretionary accruals. Leverage and return on assets are positively related to earnings management, while the cash flow from operations shows a negative relationship. The findings provide useful insights to regulators, policy makers and professional accounting bodies to better regulate the quality of audit services performed.

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## 1. INTRODUCTION

### 1.1. Background of the Study

Financial statements are the most important source of information for investment decisions. In the financial statements, our first and foremost and most significant variable that attracts attention is the company's earnings (Maverick, 2022). Earning is simply what the firm earns by deploying its resources. In other words, a company's earnings are the residual income, which depicts the company's underlying financial performance.

Earnings play an essential role in signaling and directing resource allocation in capital markets. Theoretically, the value of equity is the present value of the entity's future earnings (Man & Wong, 2013). Therefore, the company's reported earnings communicate information regarding corporate performance and the base on which, investment and allocation decisions are made. When making such decisions, we entirely believe and base our opinion on the reported earnings of that company. But, to which extent the reported earnings are reliable is still a reasonable question in the investors' minds. Apart from all these questions, there is still trust between the preparers and the users of the financial statements that the reported financial information is prepared according to relevant accounting standards, ethics, and extreme economic reality.

Such investor trust is broken into pieces when earnings are managed to create a falsified picture rather than showing reality. Earnings management is the manipulation of reported income through accounting practices and decisions. Accounting and accounting standards are evolving to the present. This evolution has given a considerable extent of space for the professional judgements of accountants. But managers and accountants misuse this chance to exercise their professional judgment on opportunistic perspective rather than efficiency to create a falsified profitability picture.

As solutions to this issue, companies began to practice corporate governance practices and established internal audit departments and also the requirement of an external independent audit of the financial statements prepared by the management of the company was also made compulsory for the listed companies in the Colombo Stock Exchange (CSE) in the context of Sri Lanka. Among these solutions practicing corporate governance and external auditing plays an important role.

Corporate Governance (CG), in the sense, is the set of processes, rules, regulations and policies that governs corporate behaviour. The function of CG is to effectively monitor top management and decrease agency costs stemming from conflicts of interest between shareholders and the management. Another essential part of CG is to ensure the quality of the financial reporting process. There is a strong belief that effective and good CG Practices in an entity minimize earnings management.

In Sri Lanka, external auditing is made compulsory for the listed firms. Thus, it reveals that the audited statements of financial information are trustworthy, reliable and accurate. Despite all these control measures, we can still experience earnings management. The scandals can prove this happened in reality. The fall of Pramuka Bank, Touchwood Investments, Golden Key PLC and ETI Finance most recently was some prominent cases reported in Sri Lanka. And in the global context, Enron, WorldCom, Tyco and Satyam are the most famous examples.

Therefore, this paper aims to explore the relationship between corporate governance and audit quality on

earnings management in the context of listed companies in Sri Lanka.

## **1.2. Research Problem**

Major business failures and accounting scandals that happened worldwide during the past few decades have dented investor confidence and have raised several questions on the effectiveness of a firm's internal control system, enterprise risk management, and governance structures. CG has come into action to address the businesses mentioned above failures (Rajapaksha & Thilakasiri, 2020). The presence of effective CG is a solution to the agency costs. On the other hand, auditing is a monitoring mechanism implemented to overcome the agency problem and ensure the pliancy offered through accounting standards is not used opportunistically. A strong auditing practice is necessary to support the well-functioning of the reporting system.

But the collapse of companies, as mentioned earlier, which recorded extraordinary earnings growth in their audited financial statements created doubts over the quality of audit performed and the effectiveness of the CG practices. Several studies were conducted to identify whether there is an association between audit quality and earnings management and whether there is an association between corporate governance and earnings management in Sri Lanka and worldwide (Rajeevan & Ajward, 2019; Pakianathan, 2017; Anwar & Buvanendra, 2019; Nisansala & Menike, 2018; Gerayli, et al., 2011; Alzoubi, 2016). However, there were no merely studies that experimented with the combination of these two above on earnings management. As a developing nation, Sri Lanka is now open to the international markets for investments, and there is no doubt that several foreign corporations will take part in the investments in our local corporate sector in the near future. There must be a good quality of the financial information on which the basic investment decisions are made. Therefore, Sri Lankan corporate sector is required to maintain this quality without manipulations.

In this context, this study attempts to address the fundamental issue of whether Corporate Governance practices and audit quality influence earnings management practices using evidence from Sri Lankan listed firms. Thus, the central research question of the study is to assess "whether corporate governance and audit quality have an impact on the degree of earnings management in public listed entities in Sri Lanka?"

## **1.3. Objectives of the Study**

Based on the research problem, the broad objective of this study is to examine the impact of corporate governance and audit quality on the degree of earnings management in public limited companies in Sri Lanka. Based on this broad objective, the following objectives have been developed.

1. To assess whether corporate governance mechanisms are associated with earnings management in listed companies in Sri Lanka.
2. To identify the impact of audit quality on the degree of earnings management in listed companies in Sri Lanka.

## **1.4. Significance of the Study**

The knowledge on audit quality and awareness of the factors influencing the level of audit quality both at a micro and macro level will be particularly useful to investors when appointing/reappointing auditors. This study will enable the investors to examine the existence of earnings management practices in Sri Lanka and to be mindful about financial reporting quality when investing in companies. Thereby to make more effective investment decisions.

Apart from this, understanding the importance and the role of the directors in the director's board is of a great significance to control the agency costs and direct the preparers of financial statements to present them fairly truly and accurately. Through this, the entire corporate sector given an opportunity to understand that minimizing or controlling manipulations in a company is not solidly given to managers or auditors but a combination of two can merely reduce or else abolishes the earnings management.

Additionally, knowledge broader influences to corporate governance and audit quality and the significance of these two in earnings management is important for regulators and policy makers such as Security Exchange Commission (SEC), professional accounting bodies such as Institute of Chartered Accountants of Sri Lanka (ICASL), Sri Lanka Accounting and Auditing Standards Monitoring Board (SLAASMB) etc. to better regulate the quality of audit services, for considerations of the existing code of best practices are effective enough and take necessary measures to mitigate the practices of earnings management.

## **2. LITERATURE REVIEW**

### **2.1. Theoretical Review of concepts**

#### **2.1.1 Earnings Management**

The nature of accounting accruals gives managers a great deal of discretion in determining the earnings a firm report in any given period because of information asymmetry between managers and owners. Managers can manipulate earnings in order to maximize their own interests or to signal their private information, thus influencing the informativeness of earnings (García-Meca & Sánchez-Ballesta, 2009). Earnings management most commonly defined as 'purposeful intervention in the external financial reporting process with the intention of obtaining some private gain' (Schipper, 1989). Further, Healy & Wahlen, (1999) define earnings management as a concept which 'occurs when the managers use judgement in financial reporting and in structuring transactions, to alter financial reports. Some managers use earnings management in deceiving shareholders or other stakeholders. Thus, the intention behind doing so also contributes to the questionable ethics in practice.

##### **2.1.1.1 Approaches in detecting Earnings Management**

Generally, there are various approaches in detecting earnings management. Empirical studies done so far have found managers engage in earnings management through changing accounting choice, real transactions, total accruals/discretionary accruals, specific accruals, earnings distributions approach and income smoothing.

**Accounting Choice** - The degree of flexibility offered by the financial reporting framework allows managers to misuse this flexibility and use their own judgement, which in turn creates an opportunity for earnings to be managed.

**Real Transactions** - Real earnings management involves with manipulating the timing of operating, investing and financing activities, which impact cash flow directly.

**Total Accruals/Discretionary Accruals** - Total accruals are the management judgements and estimates about cash flows in order to make accounting earnings better reflect a firm's underlying economic performance. Total accruals can be decomposed into two components; discretionary accruals and non-discretionary accruals. Non-discretionary accruals are accounting adjustments to the firm's cash flow imposed by accounting standard-setting bodies. Discretionary accruals are adjustments to cash flows selected by the managers within the flexibility of accounting regulations. Due to this flexibility, discretionary accruals are the component that often gives managers opportunities to manipulate earnings

(Sun & Rath, 2010).

**Specific Accruals** - This is different from the total accrual approach, and this approach focuses on an industry setting in which a single accrual is sizeable and requires substantial judgment.

**Income Smoothing** - Income-smoothing is a specific form of earnings management that has a clear objective to reduce the temporal volatility of earnings and produce a steadily growing stream of profits (Sun & Rath, 2010).

After discussing all these approaches, the Accruals approach is more effective in detecting earnings management. The fact that several researchers (Firnanti & Pirzada, 2019; Chtourou et al., 2001; Orazalin, 2018) have used this accrual approach in their studies to detect earnings management is the supporting point.

### **2.1.1.2 Approaches to Measure Accruals**

Accruals, relative to other methods, are preferred in detecting earnings management. Nevertheless, the major challenge for researchers using accruals to detect earnings management is the ability of the model correctly separate accruals into discretionary and non-discretionary accruals. Non-discretionary accruals are the portions that resulted from a firm's normal operations without management intervention. Discretionary accruals are subject to management manipulation. Neither is observable directly in financial statements (Sun & Rath, 2010). This section summarizes the different models and chooses the most effective one to be used in this study.

**Healy Model** - total accruals encompass non- discretionary and discretionary accrual aspects, but ultimately does not provide a distinction between discretionary accruals and non-discretionary accruals; rather, the assumption is made that total accruals are equal to non-discretionary accruals when there is no presence of earnings management. This suggests that total accruals are equal to non- discretionary accruals, with both representing earnings prior to the impact of earnings management during the period of estimation (Marai & Pavlović, 2014).

**DeAngelo Model** - the same way as Healy Model, DeAngelo model also implements total accruals as a proxy for earnings management, with a definition of total accruals as the difference between operating cash flows and net income. She further emphasizes that total accruals encompass both non-discretionary and discretionary elements.

**Jones Model** - The study by Jones is the first to have presented the model where total accrual changes may be predicted through the use of explanatory variables. It has been observed that total accrual changes are likely to arise in some way from the organization's economic position (non-discretionary accruals), meaning that total accrual changes may be the outcome stemming from earnings without manipulation.

Apart from all these models the **modified Jones model** which as an amendment of the initial Jones Model developed in 1991 has been remarked as most effective model that measures the earnings management in accruals approach. Marai & Pavlović, (2014) said that in terms of the power and specification of all models, the original and modified version of the model of Jones are acknowledged throughout the literature as being the most capable tools in terms of identifying earnings management. Further, he highlights that the main benefit associated with this method is its capacity to capture the scale of earnings management. Further, Islam et al., (2011) found that modified Jones model was very successful in detecting the earnings management rather than the initial Jones model. Thus, this study uses modified Jones model in measuring

the Earnings Management.

### **2.1.2. Corporate Governance (CG)**

CG practices continue to be an area of importance while earnings management still appears to be a problematic issue. O'Donovan (2003) defines CG as an internal system encompassing policies, processes and people that serve the needs of shareholders and other stakeholders by directing and controlling management activities with good business practices, objectivity, and integrity. Sound CG is reliant on external marketplace commitment and legislation, as well as a healthy board culture that safeguards policies and processes. Further, CG is an internal system encompassing policies, processes, and people that serve the needs of shareholders and other stakeholders by directing and controlling management (Man & Wong, 2013).

Senaratne, (2011) carried out an elaborative study on the CG reforms in Sri Lanka and summarized when and how the use of the CG practices began and further developed. CG reforms were introduced in Sri Lanka from late 1990s by way of codes on CG best practices, which sets out recommendations on the responsibilities, structure and organization of the board of directors with the aim of improving its monitoring role.

#### **2.1.2.1 Corporate Governance Mechanisms**

CG mechanisms are set of policies or procedures that define the ethical behavior of the management of the company. Such policies and procedures classified into more specific components can be termed as CG mechanisms. Large organizations appoint the board of directors to manage the company on behalf them and take decisions for the wellbeing of the company and its owners. Due to this largeness and the complexity of the firms, the need of a structure of best practices are needed for those who manage them. These ways and means include, in particular, board of directors, audit committees, auditor, ownership structure, mutual monitoring and supervisory board.

**The board of Directors** - one of the mechanisms of control that has been most discussed in research on CG and the question of its usefulness has been much of debate over the last decade. The code of best practices published by ICASL says that the role of board of directors is to provide entrepreneurial leadership of the company within a framework of prudent and effective controls which enables risks to be assessed and managed. The term board of directors in enhancing or acting as an effective control mechanism, is comprised of some basic significant elements namely Board size, Board independence and CEO Duality (García-Meca & Sánchez-Ballesta, 2009)

**Board Size** - the number of directors who are appointed to the board. A bigger board reflects that there are less manipulations and each and activity of the company are thoroughly monitored and checked. Code of best practices issued by CA Sri Lanka says that the number of directors in the board is decided by the shareholders of the company at the first Annual General Meeting.

**Board Independence** - Independent directors are more important to a firm because they represent the interest of the minor shareholders of the firm and presence of independent directors is more essential for the control of the actions of executive directors. And also, they have the ability to mitigate the agency problem between shareholders and management. Therefore, it is preferable to have directors, independent from the management to secure the board independence properly.

**CEO Duality** - CEO duality is where the chairperson of the board and the CEO of the company being held by separate persons. It is clear that there is attentiveness on power in a company when

the same person is holding the role of CEO and president of the board. When there is a CEO duality that one person receives more power to impact corporate decisions. According to Randika, (2019) board may not be able to operate independently when the CEO duality occurred. Power and authority concentrated in one person and these authorities can be misused.

**Audit Committee** - 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 code of best practices in Sri Lanka sets out that the board should establish an audit committee exclusively of non-executive directors with a minimum of three non-executive directors of whom at least three should be independent. If there are more non-executive directors, the majority should be independent.

**Ownership Structure** - The ownership structure is an effective means of control of management executives, as it brings together, when certain conditions are present (capital concentration and nature of the shareholders), the basis for efficient monitoring system, namely, an incentive controller to perform their functions, as well as cost control (Sana Triki Damak, 2013).

### **2.1.3. Audit Quality**

Auditing is generally related to agency theory and is highlighted as one of the main ways to reduce agency costs. Assessing the quality of audit has been rather a difficult task as it is unobservable and multifaceted. Many researchers and institutions have attempted to define and measure audit quality. However, there is neither commonly accepted definition nor a range of indicators to describe or assess audit quality. There is no one single definition for the term Audit Quality as it is evolving from the past even today. Most commonly used definition of audit quality is put forward by DeAngelo and he defines quality of the audit service as the 'market assessed' total probability that an auditor can discover and report a breach. Audit quality is 'market assessed' as different users perceive it in different viewpoints. Users of the audited financial statement would gauge audit quality to the extent to which it is free of material misstatements, whereas the auditor conducting the audit would measure it based on the audit methodology used (Pakianathan, 2017).

#### **2.1.3.1 Proxies to Audit Quality**

Several proxies to audit quality have been utilized in the studies from the past. This was either termed as the means used to measure the audit quality or perhaps the tools incorporated to reflect what the audit quality is. Some of the most common proxies used in the studies are audit firm size, auditors' expertise and skills, auditor's remuneration, auditors' tenure and etc. This is further analyzed in the upcoming section under the empirical evidences regarding the relationship between audit quality and earnings management.

## **2.2. Empirical Review**

### **2.2.1 The relationship between corporate governance and Earnings Management**

CG is said to be an effective control mechanism to avoid the agency costs in entities. As discussed above CG mechanisms plays a major role in minimizing the earnings management of any company. Several studies have found that there exists a significant relationship between CG and earnings management in Sri Lanka as well as in other foreign countries too. Such studies have utilized various proxies to CG in examining its relationship with earnings management.

One among such studies is Rajeevan & Ajward, (2019) which attempted to find the relationship between

CG and earnings management of Sri Lankan listed companies and found that there exists a positive relationship between CEO-Chair duality and earnings management whereas CEO duality has been used the proxy to CG. Further, supporting the same finding Ruparatne et al., (2018) examined the same relationship in listed companies of Sri Lanka using CEO duality, board independence, board members with financial expertise, number of board meetings and board size were as proxies to corporate governance. Their cross-sectional study shows that CEO duality and board size are negatively associated with earnings management while board independence, board size, board members with financial expertise are positively associated with earnings management practice.

In addition, a study conducted in Canada found that earnings management is significantly associated with some of the governance practices by audit committees and boards of directors (Chtourou et al., 2001). Their results provide evidence that effective boards and audit committees constrain earnings management activities of the companies. The number of meetings between the audit committee and internal audit function also reduces discretionary accruals. Finally, audit committee existence and internal audit function decrease earnings management and improve the financial reporting quality (Saleem & Alzoubi, 2019).

### **2.2.2 The relationship between audit quality and Earnings Management**

One of the studies in Sri Lanka by Pakianathan, (2017) found that an insignificant association between audit quality and the degree of earnings management in Sri Lankan listed firms in the Colombo Stock Exchange. She further says that audit quality exerts no significant impact on the degree of earnings management and this could be due to the prevalence of ineffective monitoring mechanism as it does not motivate auditors to improve audit in Sri Lanka. While this finding is bit strange as the doubt on the quality of audit of companies that have significantly fallen still remains unchanged.

Sitanggang et al., (2019) attempted to investigate whether audit quality is associated with real earnings management in the UK. The study covered a large sample of manufacturing companies in UK. The results provide evidence that audit fees are negatively related to abnormal operating cash flows. Conversely, audit fees are positively related to abnormal discretionary expenses. Besides, audit quality proxies show insignificant relationship with abnormal production costs and real earnings management index. Overall, the study finds partial evidence of significant relationship between audit quality and real earnings management. Based on Nigerian companies another research was also undertaken to examine the impact of audit quality on the firm's performance (Farouk, & Hassan, 2014). The results of the findings show that auditor size and auditor independence have significant impacts on the financial performance of quoted cement firms in Nigeria.

Saleem & Alzoubi, (2019) revealed that there is a significantly negative association between audit quality and earnings management. The result inferred that earnings management level is significantly lower among companies using the services of independent auditors.

## **3. RESEARCH METHODOLOGY**

### **3.1 Research Approach**

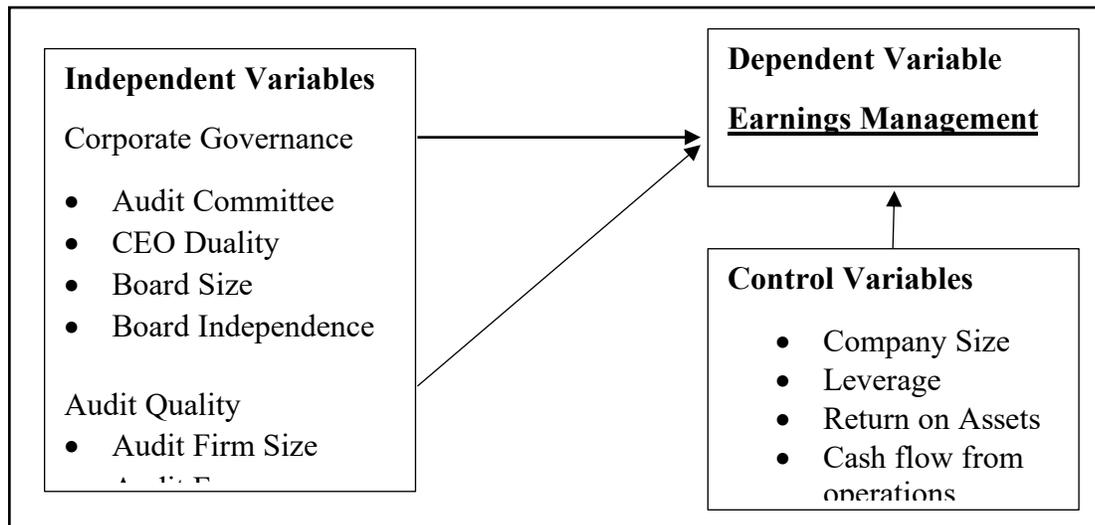
There are two approaches to research as quantitative and qualitative. Quantitative approach involves the ways and means of collecting or gathering numerical data and analyzing them through tests to arrive at conclusions of the predetermined hypothesis while the qualitative approach involves the means of gathering qualitative data such as inceptions, perceptions, views and opinions and analyzing them to arrive at conclusions (Cadena-Iñiguez, 2017). The selection of the approach among the two depends on our research questions and objectives. This study follows a quantitative approach where the input of data in this

particular study are numerical terms taken from the audited annual reports of the sample companies.

### 3.2 Conceptual Framework

The independent variables of the study are the CG and audit quality. The proxies used under CG and audit quality are board size, CEO duality, audit committee and board, audit firm size and audit fees. Earnings Management is measured using the discretionary accruals approach and specifically using the modified jones model.

Earnings management is not only influenced by corporate governance and audit quality. There are several other factors. Such factors are considered as control variables in this study and that include company size, leverage, return on assets and cash flow from operations. Accordingly, the conceptual framework diagram of the study is illustrated as follows.



**Figure 1. Conceptual Framework for the research**

Source: Developed by the authors based on previous literatures

### 3.3 Hypotheses Development

#### Audit Committee

The role of the audit committee is to ensure the quality of the financial statements as well as to minimize earnings management practices. Accordingly, the presence of an audit committee is also a significant component of corporate governance practices. Thus, it could be expected that the number of members in the audit committee and the earnings management may have significant relationships and the following hypothesis is developed,

H1: There is a significant negative impact of the number of members in the audit committee on earnings management.

#### CEO Duality

CEO duality is where the chairperson of the board and the CEO of the company being held by separate persons. This study identified this variable by referring to the section of Governance in the particular annual reports whether the both posts are held by one person or not. Ruparatne et al., (2018) shows that CEO duality is negatively associated with earnings management. Randika, (2019) and Rajapaksha & Thilakasiri, (2020) found that CEO duality plays a significant role in analyzing whether corporate governance practices

predict corporate failure. Therefore, based on these details this study also incorporated CEO duality as a proxy of Corporate Governance.

H2: There is a significant negative impact of CEO Duality on earnings management.

### Board Size

Most researchers attempted to find the relationship to between corporate governance and earnings management has used this board size proxy and effectively found out the relationship. Chtourou et al., (2001) and Rajapaksha & Thilakasiri, (2020) found that board size has a significant relationship with earnings management. Meantime most of researchers consider companies with smaller boards are more likely to fail (Randika, 2019). Board size was measured by the number of board of directors of the company.

H3: There is a significant negative impact of board size on earnings management.

### Board Independence

The Code of best practice on corporate governance in Sri Lanka recommended that the number of non-executive directors in the board should be at least two or one third of total number of directors whichever is higher. Chtourou et al., (2001) found a significant negative relationship between earnings management and board independence. Most recent researches conducted in Sri Lanka on this topic has included this board independence as a proxy of corporate governance and also found significant relationships with the independent variable (Ruparatne et al., 2018; Rajapaksha & Thilakasiri, 2020).

H4: There is a significant negative impact of board independence on earnings management

### Audit Firm Size

Audit firm size in this study measured as whether the audit is conducted the big four audit firms (KPMG, Deloitte, EY, PwC) or not. A study conducted in Nigeria found that auditor size and earnings management are significantly related (Farouk & Hassan, 2014). In Sri Lanka Pakianathan, (2017) has taken audit firm size as proxy to reflect audit quality but the study showed no any relationship with audit firm size. In Indonesia, Sumiadji & Subiyantoro, (2019) found that audit firm size and auditor tenure have a negative effect on earnings management.

H5: There is a significant negative impact of audit firm size on earnings management.

### Audit Fees

Audit fees simply refers to the consideration given to the audit firms for the service rendered by them. In Sri Lanka audit fees has not been taken as a proxy to audit quality except for (Pakianathan, 2017). Apart from this, Sitanggang et. al., (2019) has found insignificant positive relationship with the real earnings management.

H6: There is a significant positive impact of audit fees on earnings management.

## 3.1. Measurement of the Variables

**Table 1. Operationalization**

Variables	Acronym	Measurement
Board Size	BoardSiz	No of Board members of the company
Board Independence	BoardInd	Ratio of independent non-executive directors in the board to total board members of company

Audit Committee	AuCom	The number of members in the audit committee
CEO Duality	CEODual	“1” if the roles of the CEO and chairman are combined and “0” otherwise.
Audit firm size	AuSiz	"1" if auditor is a member of Big Four, "0" otherwise.
Audit Fees	AuFee	The amount paid to auditors as audit fees
Earnings Management	EM	Modified Jones Model
Company Size	ComSiz	Natural Logarithm of Total Assets
Leverage	Lev	Total Liability/Total Assets
Cash flow from Operation	CFO	Cash flow from operation/Total Assets
Return on Assets	ROA	Profit before interest and tax/Total Assets

Source: Developed by the authors based on previous literatures

This study uses discretionary accruals as the measure for earnings management. Modified Jones Model is the commonly used technique to calculate discretionary accruals. Total accruals can be computed through two approaches; balance sheet and cash flow approach. This study adopts the cash flow statement approach to calculate total accruals rather than the balance sheet approach. Total accruals are calculated under the cash flow approach using the following equation.

$$\mathbf{TACC} = \mathbf{NI} - \mathbf{CFO}$$

Where, TACC is the total accruals for the company, NI is the net income of the company, and CFO is the cash flow from operations of the company.

The above calculate TACC is used in the following equation

$$\mathbf{TACC}_{it} = \alpha_1 (1/\mathbf{TA}_{it-1}) + \alpha_2 (\Delta\mathbf{Rev}_{it} - \Delta\mathbf{Rec}_{it}) + \alpha_3 (\mathbf{PPE}_{it}) + \varepsilon_{it}$$

Where,  $\Delta\mathbf{Rev}$  is the change in revenue for company,  $\Delta\mathbf{Rec}$  is the change in receivables for company, PPE is the net property, plant and equipment for company and TA is the total assets for firm.

The variables are deflated by lagged Total assets ( $\mathbf{TA}_{it-1}$ ) as shown in the following equation.

$$(\mathbf{TACC}_{it} / \mathbf{TA}_{it-1}) = \alpha_1 (1/\mathbf{TA}_{it-1}) + \alpha_2 [(\Delta\mathbf{Rev}_{it} - \Delta\mathbf{Rec}_{it}) / \mathbf{TA}_{it-1}] + \alpha_3 [(\mathbf{PPE}_{it}) / \mathbf{TA}_{it-1}] + \varepsilon_{it}$$

Non-discretionary accruals ( $\mathbf{NDAC}_{it}$ ) will be estimated by applying the calculated coefficients on a sector specific basis. The expected discretionary accruals ( $\mathbf{DACC}_{it}$ ) are then calculated using following equation.

$$\mathbf{DACC}_{it} = \mathbf{TACC}_{it} - \mathbf{NDAC}_{it}$$

### 3.2. Population and the Sample

The listed companies in the CSE of Sri Lanka excluding banks, insurance companies and finance companies is the population of the study. As of 31<sup>st</sup> December 2020, there were 297 companies listed in the CSE. Out of such a population this study focusses primarily 41 companies with highest market capitalization. Further, the study covers the five-year period from 2016 to 2020 as the sample period of the study.

### 3.3. Data Collection

The data used in the study is secondary data. It was obtained from the published audited annual reports of the sample companies. The main items of interest to this study are the Statement of Financial Position, Statement of Profit and Loss and other Comprehensive Income, notes to the financial statements, audit committee disclosures, and audit report.

### 3.4. Data Analysis Methods

In analyzing the data, this study used correlation analysis and regression analysis to measure the impact of corporate governance and audit quality on the degree of earnings management.

#### Correlation analysis

Correlation analysis is used to analyze the relationship between all variables on pair-wise to identify the degree, direction and the significance of the association. Pearson correlation will be conducted. This test is performed to identify for any significant and strong association between the variables and to test for multicollinearity.

#### Panel Least Squares Regression analysis

After considering the influence and strength of association between two variables at a time, the study proceeds to engage in Panel Least Squares regression analysis. The advantage of performing this analysis is that it considers the influence of several variables on the dependent variable together, rather than merely considering the influence of one variable alone. Following is the regression model used in the study.

$$\text{DACC} = \beta_0 + \beta_1 \text{AuCom} + \beta_2 \text{CEODual} + \beta_3 \text{BoardIn} + \beta_4 \text{BoardSiz} + \beta_5 \text{AUSiz} + \beta_6 \text{AuFee} + \beta_7 \text{Lev} + \beta_8 \text{ROA} + \beta_9 \text{CFO} + \beta_{10} \text{ComSiz} + \varepsilon$$

## 4. DATA ANALYSIS AND DISCUSSION

### 4.1. Descriptive Statistics

The purpose of descriptive statistics is to describe the raw data in an easily and interpretable form. Mean, minimum, maximum, median, standard deviation, skewness, and kurtosis, are calculated on this regard.

**Table 2. Descriptive Statistics**

	Mean	Min	Max	Std. Dev	Skewness	Kurtosis	JB Stat.	Prob.
AbsDACC	0.120	0.002	0.886	0.133	0.543	2.474	844.86	0.502
AuSiz	0.854	0.000	1.000	0.354	0.452	1.563	171.15	0.230
AuFee	943,955	125,000	4,845,000	803,052	0.632	1.651	427.31	0.053
AuCom	3.400	2.000	7.000	0.800	0.751	2.531	47.06	0.865
CEODual	0.124	0.000	1.000	0.505	-0.283	1.635	18.00	0.945
BoardInd	0.594	0.125	1.000	0.271	0.181	1.846	12.05	0.897

BoardSiz	8.300	3.000	14.000	2.311	0.254	2.069	9.60	0.823
Lev	0.337	0.002	0.890	0.227	0.407	2.368	9.08	0.106
ROA	0.060	-0.132	0.642	0.097	0.573	2.789	491.00	0.063
CFO	0.031	-0.225	0.234	0.087	-0.127	1.981	1.10	0.577
ComSiz	21.840	20.078	24.543	1.078	0.487	2.425	10.93	0.453

Source: E-views output from financial statements of the sample companies, 2016-2020

As per the results, the absolute value of discretionary accruals (AbsDACC) of the sample has a mean value of 0.120 with a maximum of 0.886 and a minimum of 0.002. This provides evidence that listed companies in Sri Lanka do manage their earnings. It is clear that 85% of the sample companies (Mean 0.854) are audited by the big Four audit firms in Sri Lanka; KPMG, Ernst & Young, Price Waterhouse Coopers, and Deloitte implying a big four dominations in the segment of listed companies. This type of a domination of big four audit firms resulting a mean value of 89% was identified in Sri Lanka by Pakianathan, (2017). The non-big four audit firms audit the remaining 15% of the sample.

The mean value of Rs. 943,955.00 for Audit fees shows that listed companies in Sri Lanka incur an audit cost of approximately Rs. 943,955.00 annually to get their financial statements audited by the independent auditors. The minimum value of audit fees is Rs. 25,000 while the maximum value shows Rs. 4,845,000.00. Relatively larger audit fees might lead the auditor to become economically dependent on the client, thereby eroding independence. In such cases, the auditor might be willing to accept to the client's desire to misrepresent or manage earnings through discretionary accruals. At the same time very minimal audit fees may also result in inefficient auditing procedures adopted by the auditor.

Audit Committee size shows a mean value of 3.4. Soliman & Abd-Elsalam, (2014) suggest that the number of members on an audit committee affects its decisions and the larger the audit committee, the more likely it is to uncover and resolve potential problems in the financial reporting process because it is likely to provide the necessary strength and diversity of views and expertise to ensure effective monitoring.

CEO Duality shows an average value of 0.124 which means that in Sri Lankan listed companies 12% of the companies' CEO and chairperson positions are combined and are held by one single person. Thus, we can say that the remaining 88% of the companies have separate role and duties for CEO and Chairman of the company. In terms of Board independence, on average only 59% of the Board comprises of independent non-executive directors with the maximum being of 100% and minimum being 12% of the Board. The final variable describing corporate governance in this study board size and it shows a mean value of 8 indicating that the board comprises of the directors at an average of 8 members. The maximum is 14 and minimum is 3.

## **4.2. Correlation Analysis**

Before moving to start the regression analysis, it is important to check the correlation between

different variables which the researcher is going to use for the analysis. Correlation explains how two variables react to each other, e.g., what change will occur in one variable with the change in another variable. The positive correlation indicates that when one variable increase another also increases while the negative correlation shows inverse relationship. The table 4.2 shows the results of the correlation analyses.

**Table 3. Correlation Analysis**

	DACC	AuSize	AuFee	AuCom	CEO Dual	Board Ind	Board Siz	Lev	ROA	CFO	Source: E-views output from financial statements of the sample companies, 2016-2020
AuSize	-0.084										As per the table above,
AuFee	-0.142	0.131									
AuCom	-0.828	0.343	0.242								
CEODual	-0.701	-0.036	-0.057	-0.160							
BoardInd	-0.982	-0.247	0.034	-0.095	0.185						
BoardSiz	-0.807	0.075	0.380	0.375	-0.010	0.059					
Lev	0.726	0.102	0.238	0.059	-0.205	-0.072	0.164				
ROA	0.197	0.328	-0.047	0.163	-0.018	0.127	0.094	-0.217			
CFO	-0.935	0.168	-0.087	0.170	0.046	-0.033	-0.027	-0.215	0.134		
ComSiz	-0.980	0.546	0.691	0.308	0.030	0.033	0.610	0.070	0.018	-0.005	

correlation results between Audit Firm Size and DACC shows a negative coefficient of -0.084. This reveals that there is a weak negative relationship between Audit Firm Size and DACC. Specifically speaking if the Audit firm size is small, the higher the earnings management is.

Similarly, the correlation results among the Audit Fees and DACC also indicates a weak negative relationship. This implies that increase audit fees paid to the auditors decreases the earnings management. This may be due to the reason that very minimal audit fees may result in inefficient auditing procedures adopted by the auditor. Further, the correlation results among the variables defining corporate governance have shown strong negative relationship with DACC (AuCom - 0.828, CEODual -0.701, BoardInd -0.982 and BoardSiz -0.807). The underlying fact behind this is if the companies follow good corporate governance practices very minimal the opportunity for the management to manage their earnings. In other words, when the size of the Audit Committee is large, when the functions of CEO and Chairman are performed by two separate persons, when there are more independent non-executive directors in the board and when the Board size is bigger, the lessor the Earnings management is. When there are more directors on the board and the audit committee, earnings management is less likely to occur. Furthermore, it is pertinent to note that earnings management is less likely to take place when there are more independent directors on the board and the audit committee (Rajeevan & Ajward, 2019)

### 4.3. Regression Analysis

**Table 4. Results of Pooled OLS**

Dependent Variable: DACC Method: Panel Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.423029	0.215400	1.963924	0.0510
AuCom	-0.024437	0.012211	-2.001243	0.0468
CEODual	-0.043193	0.018231	-2.369153	0.0188
BoardInd	-0.018646	0.034823	-0.535444	0.0430
BoardSiz	0.922505	0.004393	0.013480	0.9893
AuSiz	0.040230	0.030038	1.339283	0.1821
AuFee	-0.148908	1.438908	-1.503610	0.1343
Lev	0.138438	0.043048	3.215923	0.0015
ROA	0.204627	0.101972	2.006693	0.0462
CFO	-0.154386	0.104895	-1.471817	0.1427
ComSiz	-0.011865	0.010490	-1.131048	0.2594
R-squared	0.283034	F-statistic		4.323981
Adjusted R-squared	0.320704	Prob (F-statistic)		0.000018
S.E. of regression	0.123520	Durbin-Watson stat		1.863703

Source: E-views output from financial statements of the sample companies, 2016-2020

The results of the Pooled OLS model show that three variables out of the four which is used to define corporate governance indicates significant relationship with discretionary accruals except that the board size (BoardSiz). In addition, they show a negative significant relationship with discretionary accruals. The positive relationship between board size and discretionary accruals is not statistically significant. Both explanatory variables of audit quality show insignificant relationships while the audit fee is negatively related and audit firm size is positively related. Speaking about the control variables leverage and return on assets are positively and significantly related to discretionary accruals but cash flow from operations and company size show insignificant negative relationship with the dependent variable.

Moving on with other statistical components, adjusted R<sup>2</sup> accounts for 32% and it implies that 32% of change of the dependent variable (DACC) is explained by the independent variables in the study. The F-Statistic P-value is statistically significant and thus it is a good sign that reflects the overall model is statistically significant and good enough in predicting the dependent variable. Standard error of regression accounts for 0.12 and it is a low level of deviation in error which is at an acceptable range. Durbin-Watson value is 1.863 which is merely close to 2 and thus, it implies that the model doesn't suffer from autocorrelation.

### 4.4. Hypotheses Testing

The researcher can make decisions about acceptance or rejection of the hypothesis based on the statistical significance of the regression model. The hypotheses testing is performed in order to achieve the objectives set out in the study.

#### 4.4.1. Corporate Governance and Earnings Management

One of the objectives of this study is to find out whether corporate governance has any impact on earnings management in the listed companies in Sri Lanka. For that purpose, four variables have been utilized in this study to define corporate governance namely audit committee size, CEO duality, board independence and board size. This section analyses separately the impact of each of these variables on the earnings management based on the regression results.

H1: There is a significant negative impact of the number of members in the audit committee on earnings management.

As per the results of regression analysis, audit committee size shows a coefficient of -0.0244 with a p-value of 0.0468 which is less than 5% and therefore the negative relationship between audit committee size and discretionary accruals is statistically significant at 95% confidence level. This statistical significance further reveals that the alternative hypothesis is accepted. The coefficient implies that the decrease in the number of members in the audit committee, significantly increases the discretionary accruals which means the earnings management is high. This is also confirmed by Juhmani, (2017); Sanjaya, (2006) and Chtourou et al., (2001).

H2: There is a significant negative impact of CEO duality on earnings management.

CEO duality is where the chairperson of the board and the CEO of the company being held by separate persons. The regression results indicate that, CEO duality has a coefficient of -0.0432 with a p-value of 0.0188 which is less than 5% and therefore the negative relationship between CEO duality and discretionary accruals is statistically significant at 95% confidence level. This statistical significance further reveals that the alternative hypothesis is accepted. The coefficient implies that the when the chairperson of the board and the CEO of the company being held by separate persons the earnings management is reduced and vice-versa. Further it conveys that, when these two positions are held by the same person or when the roles duties and responsibilities of these two positions are not clearly described, there are more chances for the preparers of the financial information to manipulate the earnings. This is complied with the studies of Ruparatne et al., (2018); Lakshan & Wijekoon, (2018) and Rajapaksha & Thilakasiri, (2020).

H3: There is a significant negative impact of board independence on earnings management.

As in the Code of best practice on corporate governance in Sri Lanka, it is specifically recommended that the number of non-executive directors in the board should be at least two or one third of total number of directors whichever is higher. In the regression analysis, board independence accounts for a coefficient of -0.0186 with a p-value of 0.0430 which is less than 5%. Therefore, the negative relationship between Board Independence and Discretionary Accruals is statistically significant at 95% confidence level. This statistical significance further reveals that the alternative hypothesis is accepted. The negative sign of the coefficient states that higher the no of independent directors in the board, the lessor the earnings management is. Pakianathan, (2017); Tulung & Ramdani, (2018) and Ruparatne et al., (2018) support for the same findings.

H4: There is a significant negative impact of the board size on earnings management.

As per the results of the table of regression analysis, board size accounts for a coefficient of 0.922505 with a p-value of 0.9893 which is less than 5%. This indicates a positive relationship between Board size and Discretionary Accruals which is not statistically significant at 95% confidence level. Therefore, the alternative hypothesis is rejected and the null hypothesis is accepted stating that there is no significant relationship between Board size and Discretionary Accruals. Findings are supported by Pakianathan, (2017); Lakshan & Wijekoon, (2012) and Randika, (2019).

#### **4.4.2. Audit Quality and Earnings Management**

The second objective of the study is to investigate the impact of audit quality on earnings

management. The proxies used to measure audit quality is audit firm size and audit fees.

H5: There is a significant negative impact of audit firm size on earnings management.

In the context of this study, Audit firm size in this study measured as whether the audit is conducted the big four audit firms (KPMG, Deloitte, EY, PwC) or not. As per the results of the Pooled OLS in the Table 4.2 Audit firm size accounts for a coefficient of 0.0402 with a p-value of 0.1821. This shows that the relationship is not statistically significant at 95% confidence level as the p-value is greater than 0.05. Therefore, the alternative hypothesis of the study is rejected and the null hypothesis is accepted concluding that the audit firm size does not have significant relationship with earnings management. Same results have been identified by Pakianathan, (2017); Sitanggang et al., (2020) and Firnanti & Pirzada, (2019).

H6: There is a significant positive impact of audit fees on earnings management.

Audit fees simply refers to the consideration given to the audit firms for the service rendered by them. In analyzing the results of the regression, the results show a coefficient of -0.148908 with a p-value of 0.1343. The p-value is greater than 0.05 indicating that the above relationship is not statistically significant at 95% confidence level. Therefore, the alternative hypothesis of the study is rejected and the null hypothesis is accepted. Therefore, it can be concluded that the audit fees do not account for the earnings management in the companies. Findings are supported by Pakianathan, (2017).

## **5. CONCLUSION**

Recent corporate scandals put the spotlight on the effectiveness of corporate governance mechanisms and external audit in detecting material misstatements thus reducing the likelihood of earnings management. The purpose of this study is to investigate Corporate Governance, audit quality and earnings management in the listed companies in Sri Lanka. The study aimed to examine the statistical significance between corporate governance and earnings management and audit quality and earnings management. As the driving force for this study, it needs to find evidence of relationships between corporate governance, audit quality and earnings management. The study examined the ability of Audit Committee size, CEO Duality, Board independence, board size, audit firm size and audit fees to predict earnings management. Three out of four proxies to corporate governance are significant predictors of earnings management. Therefore, the study concludes that corporate governance has a significant impact on Earnings management measured by Discretionary Accruals. Further, there is a significant negative association between discretionary accruals as a proxy for earnings management and Audit Committee size. This reflects that when the members in the audit committee is larger the smaller the earnings management is. These findings suggest that, the level of earnings management of Sri Lankan listed companies is decreased with the increase in the number of members on the Audit Committee. These results are consistent with the assumptions that, a larger Audit Committee is better able to ensure the quality and integrity of reported earnings and increases the likelihood of detecting material misstatements thus reducing the likelihood of earnings management. Therefore, it is best recommended for the firms to increase the no of members in the audit committee

On the other hand, CEO duality and board size are negatively and significantly associated with earnings management. That depict firms which have two separate positions for Chief Executive Officer and Chairman are more effective in reducing earning management than firms which do

not. The common conception is that segregation of duties is an effective internal control mechanism. Thus, a better option to reduce the earnings management would be to separate the roles of CEO and Chairman and let them hold by two separate persons.

On the other hand, findings showed that board independence is negatively and significantly linked with earnings management. Therefore, the findings suggest that a higher proportion of independent directors on the board would tempt to engage in less amount of earnings management practices in the listed companies in Sri Lanka. Therefore, it is best recommended to increase the proportion of independent directors in the board in order to ensure faithful information and operation.

The study further found that board size, is positively and insignificantly connected with earnings management. Positive relationship between board size and earnings management implies that when the number of directors in the board is higher the minimal the earnings management practices in those companies is. Therefore, in Sri Lanka it is better to increase the number of members in the board with relevant to the size of the company.

This study concludes that audit quality has no significant impact on the degree of earnings management in Sri Lankan listed companies. The insignificant association could be due to the presence of a weak oversight mechanism that fails to motivate auditors to improve quality or due to earnings considered in the study have been already rectified for any material misstatements. Nevertheless, the results of the study confirm the claim that the notion of audit quality constraining the degree of earnings management is not always valid in developing countries.

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