IMPACT OF EXTERNAL AUDIT EFFORT ON ACCRUALS QUALITY WITH THE MODERATE IMPACT OF CORPORTE GOVERNANCE: EVIDENCE FROM SRI LANKAN LISTED COMPANIES

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ABSTRACT

This study examines the relationship between auditor`s effort in terms of audit fee and accruals quality and how the corporate governance mechanism of the company moderates this relationship. The sample consisted 98 companies listed in Colombo Stock Exchange (CSE) for the period covering 2015 to 2017 representing the sectors with the highest market capitalization such as Beverage Food and Tobacco, Diversified Holdings, Hotels and Travels and Manufacturing which had accounted for 38% of the total market capitalization of CSE. Audit fee was considered as the independent variable and discretionary accruals, absolute value of discretionary accruals, positive value of discretionary accruals and negative value of discretionary accruals were used as alternative dependent variables. Firm size, leverage, growth and being audited by a big three auditor were used as control variables. The level of the variables were assessed and then correlation analysis and regression analyses were performed to identify relationships between independent variable and dependent variables and the impact of the moderator on this relationship. It was found that there is a negative relationship between audit fee and three out of four accruals quality measures. Thus, a positive relationship between auditor's effort and accruals quality was found. Further, it was found that corporate governance has moderate impact on the above relationship for certain accruals quality measures. These findings are expected to have significant policy implications.

Keywords: Audit fee, accruals quality, earnings management, corporate governance

1. INTRODUCTION

Financial performance is one of the key indicators used by shareholders to assess the organization that they have invested in (Gul, Chen & Tsui, 2003). Due to various corporate scandals (Enron, WorldCom, etc.) that happened in the past few years due to manipulated financial reporting, investors have become rather reluctant to invest in companies (Weerasinghe & Ajward, 2017). One main reason for such corporate failures is the earnings management of the companies done by the management at their discretion (Ajward, 2015). As a result, level of accruals quality or more specifically discretionary accruals may tend to reflect opportunistic earnings management in companies (Gul, Chen & Tsui, 2003).

According to Gul, Chen and Tsui (2003) in order to ensure that earnings are not mismanaged, the corporates rely on external audit. As per research done by them, due to the inherent risk of earnings management the external auditors put more effort which will in turn be associated with higher audit fees. This study gives a valuable input to the ongoing argument about the degree of effort of the external auditor and how an auditor should respond to the earnings management of a company especially due to the existence of discretionary accruals (Larcker & Richardson, 2004). Several critics argue that auditors face substantial economic costs when audit failures are observed (DeAngelo, 1981), which specifically happens when there are discretionary accruals and the inherent risk of the company being audited becomes high and therefore, auditors put more effort to verify the opportunistic behaviour. Hence, the higher audit effort incurred to verify the accruals might have an impact on the quality of accruals of the company (Gul, Chen & Tsui, 2003). Further, if a proper corporate governance structure is not in place to direct and control the behaviour of the managers, they may use their degree of influence in reporting financials of the company to boost up by managing the level of accrual earnings. Thus, the role of auditor in such a situation will be important, as mentioned above, due to the increase of risk (Larcker & Richardson, 2004).

Accordingly, it is interesting to examine whether there is relationship between audit effort in terms of audit fee and the level of accruals quality. Prior researches have examined many sides of this, but there is little evidence as to whether the level of an auditor`s effort in terms of the audit fee is associated with earnings quality (Larcker & Richardson, 2004). Frankel, Johnson and Nelson (2002) claim that there is a positive relationship between audit fees and level of accruals while Larcker and Richardson (2004) has observed a negative relationship between level of audit fees and discretionary accruals as more audit effort reduces the discretionary accruals. However, it was evident when analysing the prior researches that there is a dearth of studies done in this area in both

Sri Lankan and foreign contexts. Further, many researchers have arrived at mixed evidence in answering this research question. Therefore, through this study it is expected to contribute to the ongoing debate about the relationship between the audit fee and level of accruals and the input of this study will be significant both practically and theoretically. Further, it was observed in several prior researches that level of corporate governance of the company also has an effect on the level of earnings management (De Silva, Manawaduge & Ajward, 2017). Moreover, there is a dearth of researches on audit fees and accruals quality, and the effect of corporate governance as a moderator. Accordingly, the problem statement is whether there is a relationship between audit effort in terms of audit fee and the level of accruals quality and how the corporate governance mechanism of the companies moderate this relationship. Therefore, it provides a considerable validity to conduct this study.

Based on the above research problem, there are three objectives of this study. The first objective is to assess the level of audit fee, accruals quality and corporate governance in terms of the board characteristics of the companies. The second objective can be stated as examining the relationship between the fees paid to auditors and the accruals quality. The third objective is to examine the impact of corporate governance measured in terms of board characteristics on the relationship between audit fee and accruals quality. The variables are measured using various measurement models such as Modified Jones model to measure the level of accruals and to establish the relationship regression analysis is performed. Corporate governance was measured in terms of board characteristics as the main governing body of a company is its Board of Directors (De Silva, Manawaduge & Ajward, 2017). Accordingly, the variables used in this study have been defined in several ways by prior researchers. Jones (1991) defines accruals as the difference between operating cash flows and income before extraordinary items as reported in the cash flows. Quality of accruals of a company can be defined as the probability of the accruals to be subsequently realized (Gul, Chen & Tsui, 2003). Audit fee is the fee paid to external auditors for their effort in conducting the statutory audit of a company and providing an opinion on the financial statements (Castro, Peleias & De Silva, 2015). The literature defines audit effort as the number of days spent by the audit team to complete the entire audit process (Caramanis & Lennox, 2008; Palmrose, 1984; Davidson & Gist, 1996). A general definition of corporate governance is the system by which companies are directed and controlled (Cabdury Committee, 1992).

The remainder of this paper is organized as follows. In section 2 the theories and related literature are discussed and section 3 comprises of the methodology. In section 4 results and findings are discussed and finally in section 5, the paper is concluded.

2. LITERATURE REVIEW

Under this section concepts, broader theories linking auditor`s effort and earnings quality and results of empirical studies will be discussed.

2.1 Concepts

Auditor`s effort; audit fee is the fee paid to external auditors for their effort in conducting the statutory audit of a company and providing audit opinion on the financial statements of that company (Castro, Peleias & de Silva, 2015).Whereas Marra and Franco (2001) defines audit fee in a more narrow perspective as a function of estimated number of hours into the hourly rate to be charged by an auditor for the audit effort. In this study audit fee is studied as a proxy for auditor`s effort. Several prior researches define that audit effort is the number of days spent by the audit team (Caramanis & Lennox, 2008; Palmrose, 1984; Davidson & Gist, 1996).

Accruals quality; Jones (1991) defines accruals as the difference between operating cash flows and income before extraordinary items as reported in the cash flows. Prior researchers have defined accruals quality as the cash flow risk associated with misstatements that is the risk that accounting earnings may not be converted into cash flows (Cho, 2015). It was observed by Cho that the quality of accruals is the ability of those accruals to be converted into cash in the future. As per Dechow and Dichev (2002) quality of accruals and earnings is the decrease of magnitude of accrual estimation errors. Further, they state that accruals quality is the extent to which working capital accruals map into operating cash flow realizations, where a poor match signifies a low accruals quality and the main reason behind the poor match is estimation errors. Both the definitions discussed earlier emphasize on the realization of earnings and in comparison to Cho (2015) Dechow and Dichev (2002) incorporated estimation errors into defining earnings quality as well. Palepu (2000) also discussed about estimation errors and states that estimation errors as a factor that reduces accounting quality and suggests that quality of earnings depends on firm characteristics like complexity of transactions and predictability of the firm`s environment.

Corporate governance; corporate governance can be defined in many ways according to the perspective of the users. In a more operational perspective corporate governance is the process by which companies are directed and controlled (Cadbury Report, 1992; OECD, 1999). OECD (2002)

defines corporate governance in a relationship perspective as a structure that specifies the distribution of rights and responsibilities among the different participants in the organization – such as the board, managers, shareholders and other stakeholders – and lays down the rules and procedures for decision-making (OECD, 2002).In comparison to Cadbury report (1992), OECD (2002) emphasizes the relationship perspective which discusses about the rights and responsibilities of the stakeholders of the entity. In the stakeholder perspective corporate governance is the process by which corporations are made responsive to the rights and wishes of stakeholders (Demb & Neubauer, 1992). Demb and Neubauer (1992) state that this perspective broadly discusses about the stakeholder inclusivity than in the relationship perspective of OECD (2002). In a financial economics perspective corporate governance deals with the way suppliers of finance assure themselves of getting a return on their investment (Shleifer & Vishny, 1997). And in the societal perspective, the definition is expanded to the whole society and presents a much broader definition to corporate governance as the whole set of legal, cultural, and institutional arrangements that determine what (public) corporations can do, who controls them; how that control is exercised, and how the risks and return from the activities they undertake are allocated (Blair, 1995). According to the definitions discussed above in a more generalized view, corporate governance ensures that the companies are governed and managed in an ethical manner with a holistic system including all the stakeholders.

2.2 Broader theories linking auditor`s effort and earnings quality

The relationship between auditor`s effort and earnings quality can be linked to the established theories such as agency theory and stakeholder theory. Hill and Jones (1992) states that an agency relationship arises when one or more principles engage another person as their agent to perform services on behalf of the principle. Similar to Hill and Jones (1992), both Jensen and Meckling (1976) & Ross (1973) defines an agency relationship as one in which one or more persons (the principal) engages another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. An agency problem arises when the interest of the principal and the agent differs and doesn’t align in the same way.

According to Institute of Chartered Accountants in England and Wales (2005) agency theory suggests that as a result of information asymmetries and self-interest, principals’ lack reasons to trust their agents and will put in place various mechanisms to avoid conflicts of interest and align the principal and agents interest to reduce opportunistic behavior. In a company the role of the principal is played by the shareholders and the role of the agent is played by the management of the company. As a mechanism to align the interest of management and shareholder, the principal i.e.

can employ auditors to provide an independent review on the work of the agents and information provided by the agent (Hill & Jones, 1992). Therefore, the entry of auditor in to the relationship generates and agency cost which is the audit fee.

Further, the level of accruals of an organization is at the discretion of the managers who are agents of an entity (Gul, Chen & Tsui, 2003). Thus, Gul, Chen and Tsui (2003) claims that when the accruals of an entity is highly discretionary the auditor will have to assess the risk of misstatement as high and will incur an extra effort to conduct the audit of the company. Therefore, the audit fee will have to be amended according to the effort of the auditor. Thus, the agency theory provides a foreground for the accruals quality and audit fee relationship as the auditor is employed as a mechanism to monitor agent`s activities (Demsetz, 1983).

Apart from the agency theory the relationship between auditor`s effort and accruals quality can also be analyzed in relation to stakeholder theory. The traditional definition of a stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman, 1984). In contrast to Freeman (1984), Friedman (2006) states that the organization itself should be thought of as grouping of stakeholders and the purpose of the organization should be to manage their interests, needs and viewpoints. The managers should manage the corporation for the benefit of its stakeholders in order to ensure their rights and the participation in decision making on one hand and on the other hand the management must act as the stockholder's agent to ensure the survival of the firm to safeguard the long term stakes of each group (Fontaine, 2006). Then the external auditor will be appointed by the shareholders to review the management and provide an independent judgment on the firm`s performance and the stakeholders will rely on this information for decision making and the cost of this appointment will be the audit fee. The above mentioned theories imply the necessity of auditor and the incurring of the audit fee to manage the earnings quality of the organization.

2.3 Empirical Studies

There are several prior researches done to identify the relationship between accrual quality and auditor fees incorporating corporate governance impact. These results can be discussed as follows.

2.3.1 Assessing the level of audit fee, accruals quality and corporate governance

To assess the level of audit fee, various measures has been used by the previous researchers. However, Alali (2011) and Gul, Chen and Tsui (2003) have used the general audit fee model used in prior studies representing audit fees as a function of client size, client complexity, and client

risk and audit quality. According to the audit fee model, audit fees are expected to be high in relation to firm size, complexity as measured by the log segments and risks associated with inventory, receivables and debt. According to Alali (2011) and Gul, Chen and Tsui (2003) audit fees exhibit a wide range variation as the standard deviation of the audit fee of both the studies are 1.535 and 1.181 respectively.

To assess the accruals quality, researches has used some specific models introduced by the previous researchers. Doyle, Ge and McVay (2007) has used measure of accrual estimation error developed in Dechow and Dichev (2002) and modified in McNichols (2002) and Francis (2005). This measure defines the quality of accruals as the extent to which they map to present, past and future cash flows. They have used standard deviation as the measure of accruals quality and a higher standard deviation indicates lower accruals quality. However, the Dechow and Dichev (2002) approach limits the applicability of the model to accruals that are short term in nature. Therefore, in addition to this model, the modified Jones model has been widely used by the researchers to assess the accruals quality (Gul, Chen & Tsui, 2003; Larcker & Richardson, 2004; De Silva, Manawaduge & Ajward, 2017). As per the findings of De Silva, Manawaduge and Ajward (2017) in Sri Lankan context, average value of absolute discretionary accruals is 0.077 and the median value is 0.060; while the standard deviation is recorded as 0.065 indicating that there are no significant variances. Guay (1996) report evidence that the modified Jones model as described in Dechow (1995) is superior to other models in isolating the effects of discretionary accruals.

To assess the level of corporate governance, many measurements has been used by the researchers. Many researchers have assessed the level of corporate governance in terms of board characteristics (De Silva, Manawaduge & Ajward, 2017). According to their findings, in terms of number of board directors, the results indicate that on average there are eight directors on the board and three of them are independent non-executive directors and 85% of firms are observed to have CEO Chairman duality where these firms had complied with corporate governance best practices and six board meetings have been conducted by those selected firms, which is in compliance with the requirements of the code of best practices. However, Larcker and Richardson (2004) apart from using board composition, has measured the corporate governance in terms of institutional holdings, insider holdings as well. Accordingly, there is a strong negative correlation between institutional holdings and corporate insider holdings and institutional holdings are greater for firms with larger and more independent boards (Larcker & Richardson, 2004).

2.3.2 Relationship between the audit fee and accruals quality

Many prior studies have assessed the relationship between the audit fee and accruals quality. However, most of these researches provide mixed evidence on this relationship. These findings can be summarized as follows:

2.3.2.1 Positive Relationship

Frankel, Johnson, and Nelson (2002) claim that there is a positive relationship between the provision of non-audit services and accrual measures using data collected from proxy statements. Mande and Son (2015) also found that high level of audit fees reflect high audit effort which in turn enhances accruals quality using a sample of 25, 470 firm year observations of companies based on USA. Hence, the high level of audit fees are associated with high level of accruals quality which indicates that a positive relationship between audit fee and accruals quality.

According to the study done by Lin, Lin and Chen (2016) based on 17,510 firm year observations of companies listed in US stock exchange, the regression results revealed that normal audit fees have a positive association with good accruals and a negative association with accrual estimation error. However, the associations are not the same for abnormal audit fees. They found that abnormal audit fees do not reflect auditors' effort or higher audit quality. Further Schelleman and Knechel (2010) did a study to establish a relationship between short term accruals and audit fee. Primary results of the study revealed that signed short-term accruals are positively associated with audit fees as well as total audit effort.

2.3.2.2 Negative Relationship

However, in comparison to Frankel, Johnson and Nelson (2002), Larcker and Richardson (2004) has performed a research to explore whether there is an association between audit fees & accruals quality and have arrived at mixed evidence. Using pooled sample, they find that the ratio of non-audit fees to total fees has a positive relationship with the absolute value of accruals. However, using latent class mixture models to identify clusters of firms with a homogenous regression structure reveals that this positive association only occurs for about 8.5% of the sample. In contrast to the fee ratio results, they find consistent evidence of a negative relationship between the level of fees (both audit and non-audit) paid to auditors and accruals (i.e., higher fees are associated with smaller accruals) which implies that as more audit effort is put to verify the accruals resulting in an increased audit fee while the discretionary accruals are minimized.

On the other hand, Gul, Chen and Tsui (2003) examined the linkages between discretionary accruals (DAs), managerial share ownership, management compensation and audit fees of 648 Australian firms. They have found that there is a positive association between DAs and audit fees which imply that more audit effort is put verify the accruals resulting in an increased audit fee and managerial ownership negatively affects the positive relationship between DAs and audit fees. Further, this negative impact is further found to be weaker for firms with high accounting-based management compensation.

Further, Alali (2011) found that there is a positive and significant association between DAs and audit fees using date from the sample of companies listed in US stock exchange and due to this audit fee has a negative association with accruals quality. Evidence shows that this relationship is significantly higher as CFO's bonuses increase and that this relationship is moderated as CFO's salaries increase. It is also found that income-increasing DAs are positively and significantly related with audit fees and that increase in CFO's bonuses signifies this positive relationship. As per Alali (2011), the findings indicated that the coefficient of CFOD*Bonus*DA is significantly positive indicating that the higher the bonuses of the CFO, the relationship between DA and audit fees become even more positive and significant.

Based on the above observations it is evident that there are mixed evidence with regard to the relationship between audit effort in terms of audit fee and accruals quality.

2.3.3 Moderating impact of corporate governance on the relationship between audit fee and accruals quality

As per the study conducted by De Silva, Manawaduge and Ajward (2017) to observe relationship between earnings management and corporate governance mechanisms of selected companies in Sri Lankan context, it was found that when the board of directors of the company comprises with more directors with qualifications in accounting and finance, earnings management is less likely to occur. It is also observed that any of the other board characteristics or audit committee characteristics did not have any impact in reducing earnings management in the selected Sri Lankan companies. In the foreign context, Larcker and Richardson (2003) have used corporate governance as a moderator and they have measured corporate governance in terms of institutional holdings, insider holdings and board composition. Accordingly, they have found that the negative relationship between audit fee and earnings quality is strongest for the cluster of firms with weak corporate governance.

Some studies have been done to associate internal controls and accruals quality. According to Doyle, Ge and McVay (2007) it was found that the firms with weak internal control over financial reporting generally have lower accruals quality. Contrast to this Lu, Richardson and Salterio (2011) found that there is a negative association between internal control weaknesses and accrual quality. Further, Klein (2002) specify that there is a negative relationship between board independence and abnormal accruals and that most pronounced effects occur when either the board or the audit committee is comprised of a minority of outside directors.

When analyzing prior researches done in this area it could be observed that there is a dearth of studies done associating audit fee and accrual quality with corporate governance as a moderate variable. It is also observed that most of the researches had mixed evidence with regard to the relationship between audit fee in terms of audit effort and accruals quality which is discussed under the section 2.3.2 relationship between audit fee and accruals quality.

3. RESEARCH DESIGN AND METHODS

The methodology that was used in this study is described in this section in terms of the research approach, population and the sample, conceptual diagram, hypotheses, variables under observation and collection and analysis of data.

3.1 Research Approach

In this research, the relationship between audit fee and accruals quality is tested. Since a relationship is established in the study, quantitative approach is used. This approach has been used in the prior researches such as Larcker and Richardson (2004), De Silva, Manawaduge and Ajward (2017) and Gul, Chen and Tsui (2003). Thus, it takes a deductive approach. Further, data on more than one company (case) for more than one year (observations) is used in the research. Therefore, the research approach of this study is quantitative cross sectional research approach.

3.2 Population and Study Sample

Public Limited Companies (PLC) which were listed in Colombo Stock Exchange (CSE) on 31st March 2017 were used as the population. Accordingly, the population size is 295 which is categorised into 20 sectors. However, the Banks, Finance and Insurance sector was excluded as they are highly regulated and their financial statement structure is different from all other sectors and the companies with 31st December as year-end were also excluded. Out of the companies listed in CSE, companies in the four sectors with the highest market capitalization such as Beverage Food and

Tobacco, Diversified Holdings, Hotels and Travels and Manufacturing with March 31st as year-end were taken into the sample. The sample covers 49% of the total market capitalization excluding Banks, Finance and Insurance Sector. Moreover, it covers 77% of market capitalization of companies excluding companies in Banks, Finance and Insurance Sector and companies with 31st December as year-end. Therefore, the sample covers a major portion of the population. The summary of sample selection is shown in Table 1.

Table 1: Sample Selection

Selection Procedure	**Companies**
Total number of companies listed in CSE on 31.03.2017	295
Less: Companies in banks, finance and insurance sector	(68)
Companies in sectors other than banks, finance and insurance sector	227
Less: Companies with December 31st as year-end	(29)
No. of companies to be sampled	198
Less: No. of companies in sectors other than Beverage Food and Tobacco, Diversified Holdings, Hotels and Travels and Manufacturing	(95)
No. of companies in the sample	103
Less: Missing data	(5)
No. of companies selected for the analysis	98

3.3 Conceptual Diagram

Based on the literature review performed, the conceptual diagram was developed and depicted in Figure 1 below.

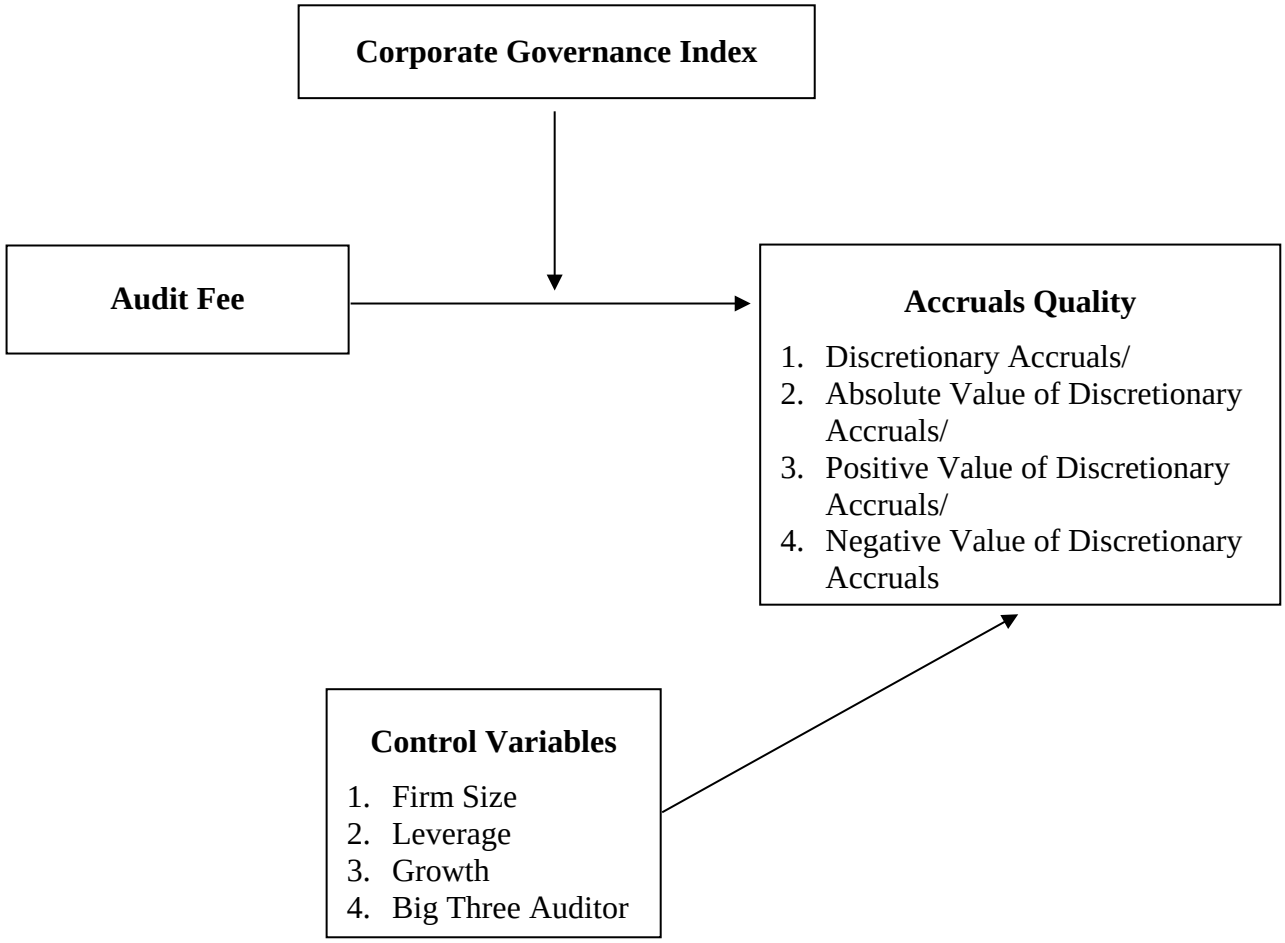

Figure 1: Conceptual Diagram

(Source: Developed by the researchers)

3.4 Hypotheses

Based on the findings of the study Larcker and Richardson (2004), there is a relationship between audit fee and accruals quality and corporate governance has a moderate impact on this relationship. Accordingly the following hypotheses are used in this research,

1. H_1: There is an association between fees paid to auditors and accruals quality.
2. H_2: The relationship between audit fee and accrual quality is moderated by the company's level of corporate governance in terms of board characteristics.

3.5 Operationalization

The variables used in the research, their definitions and measurements used to measure those variables are shown in Table 2.

Table 2: Operationalization

Variable	Definition	Measurement	Empirical Study
Audit Fee	Audit fees paid to auditors	Abnormal Audit Fee ($ABAUDFEE_{i,t}$) (See Note 1 below)	Gul, Chen and Tsui (2003)
Accruals Quality	Accruals quality is the cash flow risk associated with misstatements, that is, the risk that accounting earnings may not be converted into cash flows.	Modified Jones Model is used to get four alternative measures, 1. Discretionary Accruals ($DA_{i,t}$) 2. Absolute Value of Discretionary Accruals ($AVDA_{i,t}$) 3. Positive Value of Discretionary Accruals ($PVDA_{i,t}$) 4. Negative Value of Discretionary Accruals ($NVDA_{i,t}$) (See Note 2 below)	Larcker and Richardson (2004) De Silva, Manawaduge and Ajward (2017) Gul, Chen and Itsui (2003)
Corporate Governance Index ($COGOV_{i,t}$)	Corporate Governance is the system by which a company is controlled and directed	The value of the scores given for the board characteristics will be used to build the index. The board characteristics such as Board Size, Board Independency, CEO Chairman duality, Board Meetings, Board Expertise, Audit Committee size, Audit Committee Independency, Audit Committee Meetings, Audit Committee Skill base in Accounting and Finance and One audit committee director is a member of a professional accounting body will be used for this purpose. (See Note 3 below)	De Silva, Manawaduge and Ajward (2017)
Control Variables			
Leverage ($LEV_{i,t}$)	Borrowing of funds to finance the purchase of company assets	Ratio of total debt at the end of the period *t* to the total assets at the end of the period *t* of firm *i*.	De Silva, Manawaduge and Ajward (2017)
Audited by BIG3 ($AUDIT_{i,t}$)	Company being audited by KPMG, PWC or EY in Sri Lanka	Coded '1' if the auditor is a Big three audit firm, and '0' otherwise of the firm *i* for the period *t*.	
Firm Size ($SIZE_{i,t}$)	Size of the company	Natural logarithm of Total Assets of firm *i* for the period *t*.	
Growth ($GROWTH_{i,t}$)	Growth in company performance	Sales growth of firm *i* form the period *t-1 to t.*	

(Source: Constructed by researchers)

Note 1 – Audit Fee

To measure the Abnormal Audit Fee the following method is used which was used in Gul, Chen & Tsui (2003),

Step 1 – The coefficient parameters for each industry were separately calculated by regressing Equation 1 below.

$$FEES_{i,t} = \alpha + \beta_1 SIZE_{i,t} + \beta_2 SEG_{i,t} + \beta_3 INC_{i,t} + \beta_4 INV_{i,t} + \beta_5 AR_{i,t} + \beta_6 LEV_{i,t} + \beta_7 LOSS_{i,t} + \beta_8 AUDIT_{i,t} + \beta_9 OPINION_{i,t} + \varepsilon_i \quad (Equation\ 1)$$

(Definitions are given below)

Step 2 - Imputed above calculated industry average values to each of the firm year variables using the Equation 2, to calculate Normal Audit Fee (*NORAUDFEE*) for each firm year separately.

$$NORAUDFEE_{i,t} = \alpha + \beta_1 SIZE_{i,t} + \beta_2 SEG_{i,t} + \beta_3 INC_{i,t} + \beta_4 INV_{i,t} + \beta_5 AR_{i,t} + \beta_6 LEV_{i,t} + \beta_7 LOSS_{i,t} + \beta_8 AUDIT_{i,t} + \beta_9 OPINION_{i,t} \quad (Equation\ 2)$$

Step 3 – Normal Audit Fee (calculated under Equation 2) is subtracted from the audit fee to obtain the Abnormal Audit Fee (Equation 3). The result is denoted as *ABAUDFEE*.

$$ABAUDFEE_{i,t} = FEE_{i,t} - NORAUDFEE_{i,t} \quad (Equation\ 3)$$

$FEES_{i,t}$ = Natural logarithm of audit fee of the firm *i* for the year *t*.
$SIZE_{i,t}$ = Natural logarithm of the total assets of the firm *i* at the end of year *t*.
$SEG_{i,t}$ = Natural logarithm of the number of business segments of the firm *i* at the end of year *t*.
$INC_{i,t}$ = Ratio of operating income after depreciation to average total assets of the firm *i* for the year *t*.
$INV_{i,t}$ = Ratio of the dollar value of inventory to total assets of the firm *i* at the end of year *t*.
$AR_{i,t}$ = Ratio of the rupee value of accounts receivable to total assets of the firm *i* at the end of year *t*.
$LEV_{i,t}$ = Sum of short-term debt and long-term debt to total assets of the firm *i* at the end of year *t*.
$LOSS_{i,t}$ = Indicator variable equal to 1 if the firm *i* reports negative income in any of the previous three years at the end of year *t*, and 0 otherwise.
$AUDIT_{i,t}$ = A dummy variable, 1 if the auditor of the firm *i* for the year *t* is a Big 3 audit firm, and 0 otherwise.
$OPINION_{i,t}$ = Indicator variable equal to 1 if firm *i* receives a modified audit opinion for the year *t*, and 0 otherwise.
$NORAUDFEE_{i,t}$ = Normal Audit Fee of the firm *i* for the year *t*.
$ABAUDFEE_{i,t}$ = Abnormal Audit Fee of the firm *i* for the year *t*.

Note 2 – Accruals Quality

The basic model used to measure accruals quality in this research is the Cross-sectional Modified Jones Model discussed in DeFond and Subramanyam (1998). Accordingly, discretionary accruals are measured as follows:

Step 1 – Total accruals are measured by subtracting cash flows from operating activities from net income.

$TA_{i,t} = NI_{i,t} - CFO_{i,t}$ (*Equation 4*)

(Definitions are given below)

Step 2 – The coefficient parameters for each industry were separately calculated by regressing Equation 2 for all the companies in that particular industry (Modified Jones model) below.

$$\frac{TA_{i,t}}{A_{i,t-1}} = \alpha \frac{1}{A_{i,t-1}} + \beta_1 \frac{(\Delta REV_{i,t} - \Delta REC_{i,t})}{A_{i,t-1}} + \beta_2 \frac{PPE_{i,t}}{A_{i,t-1}} + \varepsilon, \quad \text{(Equation 5)}$$

Step 3 – Imputed above calculated industry average values to each of the firm year variables using the Equation 3 to calculate non-discretionary accruals for each firm year separately.

$$\frac{NDA_{i,t}}{A_{i,t-1}} = \alpha \frac{1}{A_{i,t-1}} + \beta_1 \frac{(\Delta REV_{i,t} - \Delta REC_{i,t})}{A_{i,t-1}} + \beta_2 \frac{PPE_{i,t}}{A_{i,t-1}} \quad \text{(Equation 6)}$$

Step 4 – The discretionary accruals are calculated by subtracting Non-Discretionary Accruals (calculated under Equation 3) from Total Accruals (calculated under Equation 1).

$$\frac{DA_{i,t}}{A_{i,t-1}} = \frac{TA_{i,t}}{A_{i,t-1}} - \frac{NDA_{i,t}}{A_{i,t-1}} \quad \text{(Equation 7)}$$

Then, the following values of the discretionary accruals ($DA_{i,t}$) is obtained, which is considered as the measure of Accruals Quality in this research,

1. Discretionary Accruals *($DA_{i,t}$)*
2. Absolute Value of Discretionary Accruals *($AVDA_{i,t}$)*
3. Positive Value of Discretionary Accruals *($PVDA_{i,t}$)*
4. Negative Value of Discretionary Accruals *($NVDA_{i,t}$)*

$TA_{i,t}$ = Total Accruals of the firm *i* at the end of year *t*.

$NI_{i,t}$ = Net income before discontinued segments of the firm *i* for the year *t*.

$CFO_{i,t}$ = Cash flows from operations of the firm *i* for the year *t*.

$\Delta REV_{i,t}$ = Change in revenue for the firm i from year *t-1* to *t*.

$\Delta REC_{i,t}$ = Change in receivables for the firm i from year *t-1* to *t*.

$PPE_{i,t}$ = Net value of the property plant and equipment for the firm *i* at the end of year *t*.

$A_{i,t-1}$ = Total assets for the firm *i* at the end of year *t*.

$NDA_{i,t}$ = Non-Discretionary Accruals for company *i* in year *t*.

$DA_{i,t}$ = Discretionary Accruals for company *i* in year *t*.

Note 3 – Corporate Governance

Corporate governance is measured in terms of board characteristics as the main governing body of a company is its Board of Directors. To measure corporate governance in terms of board

characteristics, an index ($COGOV_{i,t}$) is built using the value of the scores for each company calculated as indicated in Table 3.

Table 3: Measuring Corporate Governance in terms board characteristics

Board Characteristic	Score
1. Board Size ($BSIZE_{i,t}$)	Coded as '1', if total number of board of directors for firm *i* and period *t* is equal or greater than the industry average and '0' otherwise.
2. Board Independency($INDBD_{i,t}$)	Coded as '1', if number of independent non- executive directors on the board for firm *i* and period *t* is equal or greater than the industry average and '0' otherwise.
3. CEO Chairman duality ($CEOCHAIR_{i,t}$)	Coded as '1', if CEO and chairman roles are separated, and '0' otherwise, for firm *i* and period *t*.
4. Board Meetings ($BMEET_{i,t}$)	Coded as '1', if number of board meetings for firm *i* and period *t* is equal or greater than the industry average and '0' otherwise.
5. Board Expertise ($BFAEXP_{i,t}$)	Coded as '1', if number of members with financial or/and accounting qualifications for firm *i* and period *t* is equal or greater than the industry average and '0' otherwise.
6. Audit Committee size ($AUDCSIZE_{i,t}$)	Coded as '1', if number of members in the audit committee for firm *i* and period *t* is equal or greater than the industry average and '0' otherwise.
7. Audit Committee Independency ($INDAC_{i,t}$)	Coded as '1', if number of independent non- executive directors on the Audit Committee for firm *i* and period *t* is equal or greater than the industry average and '0' otherwise.
8. Audit Committee Meetings ($ACMEET_{i,t}$)	Coded as '1', if number of audit committee meetings for firm *i* and period *t* is equal or greater than the industry average and '0' otherwise.
9. Audit Committee Skill base in Accounting and Finance ($ACFAEXP_{i,t}$)	Coded as '1', if number of members with Finance or/and Accounting qualifications in the audit committee for firm *i* and period *t* is equal or greater than the industry average and '0' otherwise.
10. One audit committee director is a member of a professional accounting body ($ONEDMPAB_{i,t}$)	Coded as '1' if at least one director is a member of a professional accounting body, and '0' otherwise, in the audit committee for firm *i* and period *t*.

(Source: De Silva, Manawaduge and Ajward (2017))

The Corporate Governance Index ($COGOV_{i,t}$) was derived using the sum of scores received by the company for the ten board characteristics as mentioned in Table 3.

3.6 Sources and Collection of Data

Data for the research were obtained from the annual reports of the companies in the sample from the Colombo Stock Exchange website.

3.7 Data Analysis Strategies

In order to analyse the data, initially cleaning and screening was performed where the missing data and outliers were treated. Then, descriptive statistics was performed to describe and understand the data. To achieve the objectives of this research the following analysis were performed.

Objective 1 - Assess the level of audit fee, accruals quality and corporate governance in terms of board characteristics of the companies.

Descriptive statistics such as mean, median, standard deviation, quartiles, skewness and kurtosis was used to assess the levels of audit fee, accruals quality and corporate governance in terms of board characteristics of the companies.

Objective 2 - Examine the relation between the audit fee and the accruals quality.

The relationship between audit fee and accruals quality was analysed using three methods.

1. A Pearson's' Correlation analysis was done which analyses the relationship on a bivariate basis (without considering the impact of the control variables)
2. An OLS regression analysis was done using the following regression model for each of the accrual measures which considers the impact of the control variables,

$$(DA_{i,t}) / (AVDA_{i,t}) / (PVDA_{i,t}) / (NVDA_{i,t}) = \alpha + \beta_1 ABAUDFEE_{i,t} + \beta_2 LEV_{i,t} + \beta_3 AUDIT_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 GROWTH_{i,t} + \varepsilon_{i,t} \quad (Equation\ 8)$$

   (Definitions of each variable are provided in Table 2 on operationalization)
3. A multivariate panel regression analysis was done using the above regression model (*Equation 8*) for each of the accrual measures. [1]

Objective 3 - Examine the moderate impact of corporate governance measured in terms of board characteristics on the relationship between audit fee and accruals quality.

The moderate impact of corporate governance measured in terms of board characteristics on the relationship between audit fee and accruals quality was analyzed using three methods.

1. The companies were categorized into three categories as companies with strong, average and weak corporate governance using Corporate Governance Index $(COGOV_{i,t})$ as mentioned in Table 2 and the above analysis (panel regression analysis performed for

[1] The regression assumptions of normality, linearity, homoscedasticity and independence were tested and no significant anomalies were identified. Further, Hausman Test was performed and as per the result of the Hausman Test, Fixed effect was selected.

objective 2) was performed for each categories of companies and the strength of the R^2 values were used to check whether the explanatory power of the model increases as corporate governance level increase.

2. A OLS regression analysis was performed using the following regression model to test the interaction affect by checking whether the interaction coefficient is significant,

$$(DA_{i,t}) / (AVDA_{i,t}) / (PVDA_{i,t}) / (NVDA_{i,t}) = \alpha + \beta_1 ABAUDFEE_{i,t} + \beta_2 COGOV_{i,t} + \beta_3 (ABAUDFEE_{i,t} \; X \; COGOV_{i,t}) + \beta_4 LEV_{i,t} + \beta_5 BIG3_{i,t} + \beta_6 FSIZE_{i,t} + \beta_7 GROWTH_{i,t} + \varepsilon_{i,t} \quad (Equation\ 9)$$

(Definitions of each variable are provided in Table 2 on operationalization)

3. A multivariate panel regression analysis was performed using the above regression model (*Equation 9*) to test the interaction affect by checking whether the interaction coefficient is significant.

4 FINDINGS AND DISCUSSIONS

Several statistical analyses were conducted to identify the nature of the collected dataset and ensure the validity of the sample before performing the main analyses. Results of descriptive statistics, correlation analysis and regression analyses and related discussions on the results are presented below.

4.1 Assessing the Level of Audit Fee, Accruals Quality and Corporate Governance (Objective 1)

Descriptive statistics were used in order to summarize the collected data and assess the level of audit fee, accruals quality, and corporate governance in terms of board characteristics of the companies. Table 4 presents the descriptive statistics for the independent variable $(ABAUDFEE_{i,t})$, dependent variables $(DA_{i,t} / AVDA_{i,t} / PVDA_{i,t} / NVDA_{i,t})$ and moderate variable $(COGOV_{i,t})$ as well as for the control variables.

The mean value $ABAUDFEE_{i,t}$ is (0.0011) and the standard deviation is 0.4239 which is comparatively high. The mean value of discretionary accruals $(DA_{i,t})$ is 0.1040 and the median is 0.0803 while standard deviation is 0.1252. Moreover, standard deviations of absolute value of discretionary accruals $(AVDA_{i,t})$, positive value of discretionary accruals $(PVDA_{i,t})$ and negative value of discretionary accruals $(NVDA_{i,t})$ respectively 0.1097, 0.1138 and 0.0123. Accordingly, there are no any significant variations. The mean value of Corporate Governance Index $(COGOV_{i,t})$

is just above 5 while the standard deviation is 1.9528 which indicates that corporate governance level is high in certain companies and low in certain companies but on average corporate governance is moderately implemented in Sri Lanka. On average, firms in the selected sample were financed through 30% of debt. Furthermore, average sales growth rate *($GROWTH_{i,t}$)* of the selected firms is 8% and 88% of the sample firms were audited by big three auditors *($AUDIT_{i,t}$)*.

Table 4: Descriptive Statistics

Variables[a]	N	Mean	Median	Std. Dev.	Skewness	Kurtosis	Min.	Max.
$DA_{i,t}$	294	0.1040	0.0803	0.1252	0.4994	(0.6496)	(0.0904)	0.3639
$AVDA_{i,t}$	294	0.1287	0.0951	0.1097	0.7636	(0.5565)	0.0047	0.3661
$PVDA_{i,t}$	294	0.1135	0.0803	0.1138	0.8013	(0.5389)	0.0000	0.3639
$NVDA_{i,t}$	294	(0.0055)	0.0000	0.0123	(2.0649)	2.5399	(0.0377)	0.0000
$ABAUDFEE_{i,t}$	294	(0.0011)	(0.0216)	0.4239	0.1841	(0.8864)	(0.7028)	0.7818
$COGOV_{i,t}$	294	5.3333	5.0000	1.9528	(0.0933)	(0.9212)	1.0000	9.0000
$LEV_{i,t}$	294	0.3044	0.2714	0.2130	0.3958	(0.7397)	0.0002	0.9022
$AUDIT_{i,t}$	294	0.8878	1.0000	0.3162	(2.4693)	4.1257	0.0000	1.0000
$SIZE_{i,t}$	294	14.9919	14.9234	1.1864	(0.0020)	(0.7889)	12.8067	17.0866
$GROWTH_{i,t}$	294	0.0805	0.0556	0.1479	0.2746	(0.8060)	(0.1504)	0.3420

(Source: Developed by researchers)

[a]Definitions of these variables are given in Table 2.

4.2 Examining the Relation between the Audit Fee and the Accruals Quality (Objective 2)

The relationship between the audit fee and the accruals quality was analyzed through Pearson's Correlations Analysis, OLS regression and panel regression analysis as explained in the Section 3.7 Data Analysis Strategies.

4.2.1 Correlations analysis

According to Table 5, which shows Pearson`s correlations, there are no statistically significant correlations between abnormal audit fee ($ABAUDITFEE_{i,t}$) and discretionary accruals ($DA_{i,t}$), absolute value of discretionary accruals ($AVDA_{i,t}$), positive value of discretionary accruals ($PVDA_{i,t}$) and negative value of discretionary accruals ($NVDA_{i,t}$). Since no significant correlations exists between the audit fee and the accrual measures, the hypothesis (H_1) is not supported.

Since correlation analysis considers only two variables at a time and does not consider control variables, it is not possible to draw conclusions based on this analysis due to the effect of other variables that are not considered in the analysis. Due to this limitation of the correlation analysis a

multiple regression was performed. Multiple regression enables using more independent variables and controlling variables at a time, and therefore is superior to correlation analysis.

Table 5: Correlation Analysis

	Variables[a]	1	2	3	4	5
1	$ABAUDFEE_{i,t}$					
2	$DA_{i,t}$	-0.0103				
3	$AVDA_{i,t}$	0.0444	.8239**			
4	$PVDA_{i,t}$	0.0016	.9844**	.9023**		
5	$NVDA_{i,t}$	-0.0379	.5867**	.1236*	.4461**	

(Source: Developed by researchers)

[a]Definitions of these variables are given in Table 2.

*p<0.05; **p<0.01

4.2.2 OLS Regression analysis

An OLS regression was performed for the three year data of the 98 companies in the sample by using the each of the accruals quality measure separately and the results are depicted in Table 6.

Table 6: OLS Regression Analysis for Relationship between Audit Fee and Accruals Quality

Variables[a]	$DA_{i,t}$		$AVDA_{i,t}$		$PVDA_{i,t}$		$NVDA_{i,t}$	
	Coef.	***t***	**Coef.**	***t***	**Coef.**	***t***	**Coef.**	***t***
$ABAUDFEE_{i,t}$	-0.0014	-0.080	0.0136	0.920	0.0022	0.150	-0.0011	-0.660
$LEV_{i,t}$	-0.0815**	-2.340	-0.0179	-0.590	-0.0619*	-1.960	-0.0086**	-2.450
$AUDIT_{i,t}$	0.0123	0.530	0.0131	0.640	0.0136	0.640	-0.0010	-0.430
$SIZE_{i,t}$	-0.0200***	-3.220	-0.0229***	-4.210	-0.0208***	-3.690	0.0001	0.220
$GROWTH_{i,t}$	0.0938*	1.920	0.0502	1.170	0.0760*	1.710	0.0082*	1.680
Constant	0.4099	4.530	0.4611	5.810	0.4254	5.180	-0.0047	-0.520
Prob > F	0.0008		0.0009		0.0005		0.1502	
R^2	0.0700		0.0693		0.0731		0.0276	
Adj. R^2	0.0539		0.0531		0.0570		0.0108	
N	294		294		294		294	

(Source: Developed by researchers)

[a]Definitions of these variables are given in Table 2.

*p<0.10; **p<0.05; ***p<0.01

According to the OLS regression results in Table 6, none of the measures of accruals quality shows a systematic significant relationship with $ABAUDFEE_{i,t}$. However, when the control variables are considered certain relationship exists. $LEV_{i,t}$ shows a significant (p<0.01) negative relationship with $DA_{i,t}$ and $NVDA_{i,t}$ and a significant (p<0.05) negative relationship with $PVDA_{i,t}$.. $SIZE_{i,t}$ shows a significant (p<0.01) negative relationship with $DA_{i,t}$, $AVDA_{i,t}$ and $PVDA_{i,t}$. Meanwhile, $GROWTH_{i,t}$ shows a significant (p<0.10) positive relationship with $DA_{i,t}$, $PVDA_{i,t}$ and $NVDA_{i,t}$. Since no

systematic significant relationship exists between the audit fee and the accrual measures at all three significance levels, the hypothesis (H_1) is not supported.

4.2.3 Panel Regression analysis

A panel regression was performed for the three year data of the 98 companies in the sample by using the each of the accruals quality measure separately and the results are depicted in Table 7. According to the regression analysis performed and tabulated in Table 7, the $ABAUDFEE_{i,t}$ has a systematic significant (p<0.01) negative relationship with $DA_{i,t}$ and $PVDA_{i,t}$ and (p<0.05) negative relationship a $NVDA_{i,t.}$ This indicates that the discretionary accruals decrease when the audit fee increase and the p value of $DA_{i,t}$ is the lowest amounting to 0.004 which shows that there is a strong relationship between $ABAUDFEE_{i,t}$ and $DA_{i,t}$. Further, the R^2 value of all four accruals quality measures fall within 2% to 6% and out of which $DA_{i,t}$ has the highest value. Therefore, it could be noticed that a negative relationship between audit fee and accruals quality exists. When control variables are considered, $LEV_{i,t}$ has systematic significant (p<0.01) negative relationship with $DA_{i,t}$ and $NVDA_{i,t}$ and $SIZE_{i,t}$ has a systematic significant (p<0.01) positive relationship with $DA_{i,t}$ and $NVDA_{i,t.}$ Since a systematic significant relationship exists between the audit fee and the accruals quality measures $DA_{i,t,}$ $PVDA_{i,t}$ and $NVDA_{i,t}$, the hypothesis (H_1) is supported by three out of the four accruals quality measures.

Table 7: Panel Regression Analysis for Relationship between Audit Fee and Accruals Quality

Variables[a]	$DA_{i,t}$		$AVDA_{i,t}$		$PVDA_{i,t}$		$NVDA_{i,t}$	
	Coef.	***t***	**Coef.**	***t***	**Coef.**	***t***	**Coef.**	***t***
$ABAUDFEE_{i,t}$	-0.1202***	-2.900	-0.0464	-1.420	-0.0925***	-2.670	-0.0134**	-2.290
$LEV_{i,t}$	-0.2420***	-2.880	0.1370**	2.070	-0.1480**	-2.100	-0.0454***	-3.840
$AUDIT_{i,t}$	0.0000		0.0000		0.0000		0.0000	
$SIZE_{i,t}$	0.1656***	3.830	0.0858**	2.520	0.1356***	3.750	0.0121**	1.980
$GROWTH_{i,t}$	0.0465	1.200	0.0240	0.790	0.0376	1.160	0.0034	0.620
Constant	-2.3089	-3.560	-1.2014	-2.350	-1.8769	-3.460	-0.1727	-1.890
R^2 – within	0.1568		0.0742		0.1345		0.1143	
- between	0.0533		0.0945		0.0678		0.0014	
- overall	0.0238		0.0609		0.0376		0.0057	
N	294		294		294		294	

(Source: Developed by researchers)

[a]Definitions of these variables are given in Table 2.

*p<0.10; **p<0.05; ***p<0.01

4.3 Examine the Moderate Impact of Corporate Governance (Objective 3)

The moderate impact of corporate governance was examined through panel regression of companies categorised into companies with strong, average and weak corporate governance as based the level of corporate governance using the company average of $COGOV_{i,t}$, and both OLS

and panel regression with the interaction variable as explained in the Section 3.7 Data Analysis Strategies.

4.3.1 Panel Regression of Companies Categorised based on Level of Corporate Governance

The results of the panel regression of companies categorised into companies with strong, average and weak corporate governance as based the level of corporate governance using the company average of $COGOV_{i,t}$, is given in Table 8.

Table 8: Panel Regression of Companies Categorised based on Level of Corporate Governance

Variables[a]	$DA_{i,t}$		$AVDA_{i,t}$		$PVDA_{i,t}$		$NVDA_{i,t}$	
	Coef.	***t***	**Coef.**	***t***	**Coef.**	***t***	**Coef.**	***t***
Panel A: Companies with Strong Corporate Governance ($COGOV_{i,t}$ from 7 to 9)								
$ABAUDFEE_{i,t}$	-0.0910	-1.410	-0.0985**	-2.090	-0.0882*	-1.670	0.0013	0.150
$LEV_{i,t}$	-0.1965*	-1.700	0.1923**	2.280	-0.1224	-1.300	-0.0305*	-1.910
$AUDIT_{i,t}$	0.0000		0.0000		0.0000		0.0000	
$SIZE_{i,t}$	0.1960**	2.260	0.1085*	1.720	0.1611**	2.280	0.0131	1.100
$GROWTH_{i,t}$	0.1155*	1.830	0.0604	1.310	0.0998*	1.940	0.0059	0.680
Constant	-2.8496	-2.150	-1.6041	-1.660	-2.3303**	-2.150	-0.1961	-1.070
R^2 – within	0.2098		0.2095		0.2147		0.0840	
- between	0.1978		0.1391		0.1925		0.0323	
- overall	0.0982		0.0815		0.1102		0.0055	
N	111		111		111		111	
Panel B: Companies with Average Corporate Governance ($COGOV_{i,t}$ from 4 to 6)								
$ABAUDFEE_{i,t}$	-0.1511**	-2.540	-0.0222	-0.410	-0.1084**	-2.090	-0.0233**	-2.590
$LEV_{i,t}$	0.0767	0.520	0.0747	0.550	0.0878	0.680	-0.0217	-0.970
$AUDIT_{i,t}$	0.0000		0.0000		0.0000		0.0000	
$SIZE_{i,t}$	0.1838***	3.450	0.1256**	2.570	0.1603***	3.450	0.0129	1.610
$GROWTH_{i,t}$	0.0363	0.700	0.0221	0.460	0.0264	0.580	0.0067	0.860
Constant	-2.6170	-3.350	-1.7354	-2.430	-2.2640	-3.320	-0.1898	-1.610
R^2 – within	0.2337		0.0981		0.2145		0.1329	
- between	0.0375		0.0750		0.0465		0.0013	
- overall	0.0155		0.0461		0.0233		0.0075	
N	123		123		123		123	
Panel C: Companies with Weak Corporate Governance ($COGOV_{i,t}$ from 1 to 3)								
$ABAUDFEE_{i,t}$	-0.0657	-0.650	0.0184	0.250	-0.0295	-0.360	-0.0185	-1.320
$LEV_{i,t}$	-0.7476***	-3.650	0.0708	0.470	-0.5096***	-3.030	-0.1085***	-3.810
$AUDIT_{i,t}$	0.0000		0.0000		0.0000		0.0000	
$SIZE_{i,t}$	0.0258	0.230	-0.0653	-0.800	-0.0145	-0.160	0.0093	0.600
$GROWTH_{i,t}$	-0.0751	-0.740	-0.0843	-1.130	-0.0740	-0.890	-0.0082	-0.580
Constant	-0.0426	-0.030	1.0891	0.890	0.4967	0.360	-0.1108	-0.480
R^2 – within	0.2807		0.0525		0.2174		0.3151	
- between	0.0000		0.0294		0.0001		0.0167	
- overall	0.0067		0.0276		0.0031		0.0279	
N	60		60		60		60	

(Source: Developed by researchers)

[a]Definitions of these variables are given in Table 2.

*p<0.10; **p<0.05; ***p<0.01

The overall R^2 value has decreased as the level of corporate governance decrease except for $NVDA_{i,t}$ which implies that the level of corporate governance has a moderating impact on the relationship between $ABAUDFEE_{i,t}$ and the accruals quality measures $DA_{i,t,}$ $AVDA_{i,t}$ and $PVDA_{i,t}$. Nevertheless, the value of the overall R^2 is very low. Thus, the hypothesis (H_2) is weakly supported for the accruals quality measures $DA_{i,t,}$ $AVDA_{i,t}$ and $PVDA_{i,t.}$

4.3.2 OLS Regression with Interaction Variable

Results of the OLS regression analysis performed by using an interaction variable *($ABAUDFEE_{i,t}$ X $COGOV_{i,t}$)* to the regression model used to examine the relationship between audit fee and accruals quality measures is shown below in Table 9.

Table 9: OLS Regression Analysis for Moderate Impact of Corporate Governance

Variables[a]	$DA_{i,t}$		$AVDA_{i,t}$		$PVDA_{i,t}$		$NVDA_{i,t}$	
	Coef.	***t***	**Coef.**	***t***	**Coef.**	***t***	**Coef.**	***t***
$ABAUDFEE_{i,t}$	0.0007	0.010	0.0462	1.100	0.0155	0.350	-0.0065	-1.340
$COGOV_{i,t}$	-0.0024	-0.660	-0.0048	-1.490	-0.0031	-0.930	0.0004	1.070
$ABAUDFEE_{i,t}$ X $COGOV_{i,t}$	-0.0004	-0.050	-0.0060	-0.830	-0.0024	-0.330	0.0010	1.190
$LEV_{i,t}$	-0.0828**	-2.320	-0.0251	-0.800	-0.0653**	-2.010	-0.0075**	-2.110
$AUDIT_{i,t}$	0.0125	0.530	0.0119	0.580	0.0133	0.620	-0.0007	-0.320
$SIZE_{i,t}$	-0.0194***	-3.090	-0.0216***	-3.950	-0.0200***	-3.510	0.0000	0.040
$GROWTH_{i,t}$	0.0965*	1.960	0.0579	1.350	0.0803*	1.800	0.0074	1.500
Constant	0.4145	4.550	0.4707	5.930	0.4315	5.230	-0.0056	-0.610
Prob > F	0.0032		0.0014		0.0018		0.1573	
R^2	0.0714		0.0784		0.0762		0.0361	
Adj. R^2	0.0487		0.0558		0.0536		0.0125	
N	294		294		294		294	

(Source: Developed by researchers)

[a]Definitions of these variables are given in Table 2.

*p<0.10; **p<0.05; ***p<0.01

According to the regression results depicted in Table 10, the coefficient of the interaction variable *($ABAUDFEE_{i,t}$ X COGOVi,t)* doesn't show a systematic significant relationship with any of the accruals quality measurements indicating that the relationship between the audit fee and accruals measures is no moderated by corporate governance. Further, the value of R^2 is less than 6% for all accruals quality measurements. Since no systematic significant moderate impact of corporate governance on the relationship between the audit fee and the accrual measures exist at all three significance levels, the hypothesis (H_2) is not supported.

4.3.2 Panel Regression with Interaction Variable

Results of the panel regression analysis performed by using an interaction variable *(ABAUDFEE$_{i,t}$ X COGOV$_{i,t}$)* to the regression model used to examine the relationship between audit fee and accruals quality measures is shown below in Table 10.

Table 10: Panel Regression Analysis for Moderate Impact of Corporate Governance

Variables[a]	$DA_{i,t}$		$AVDA_{i,t}$		$PVDA_{i,t}$		$NVDA_{i,t}$	
	Coef.	***t***	**Coef.**	***t***	**Coef.**	***t***	**Coef.**	***t***
$ABAUDFEE_{i,t}$	-0.0235	-0.300	0.0826	1.330	0.0144	0.220	-1.610	-1.610
$COGOV_{i,t}$	0.0047	0.660	0.0057	1.040	0.0049	0.830	0.190	0.190
$ABAUDFEE_{i,t}$ X $COGOV_{i,t}$	-0.0191	-1.410	-0.0254**	-2.430	-0.0211*	-1.880	0.500	0.500
$LEV_{i,t}$	-0.2420***	-2.870	0.1373**	2.100	-0.1478**	-2.110	-3.840***	-3.840
$AUDIT_{i,t}$	0.0000		0.0000		0.0000			
$SIZE_{i,t}$	0.1603***	3.690	0.0787**	2.330	0.1297***	3.580	2.020**	2.020
$GROWTH_{i,t}$	0.0436	1.130	0.0200	0.670	0.0343	1.070	0.640	0.640
Constant	-2.2547	-3.450	-1.1246	-2.2100	-1.8144	-3.330	-1.940	-1.940
R^2 – within	0.1671		0.1060		0.1527		0.1157	
- between	0.0556		0.0944		0.0705		0.0021	
- overall	0.0241		0.0564		0.0376		0.0063	
N	294		294		294		294	

(Source: Developed by researchers)

[a]Definitions of these variables are given in Table 2.

*p<0.10; **p<0.05; ***p<0.01

According to the regression results depicted in Table 10, the coefficient of the interaction variable *(ABAUDFEE$_{i,t}$ X COGOV$_{i,t}$)* shows a systematic significant (p<0.05) negative relationship with $AVDA_{i,t}$ and a systematic significant (p<0.10) negative relationship with $PVDA_{i,t}$ indicating that the relationship between the audit fee and accruals quality is moderated by corporate governance. However, the value of R^2 is less than 6% for all accruals quality measurements. Since systematic significant moderate impact of corporate governance on the relationship between the audit fee and the accrual measures exists only for $AVDA_{i,t}$ and $PVDA_{i,t}$ and the R^2 of the models are very low , the hypothesis (H_2) is weakly supported for $AVDA_{i,t}$ and $PVDA_{i,t.}$

4.4 Discussion

Table11: Summary of Results

		Alternative Dependent Variables			
Hypotheses	**Test**	$DA_{i,t}$	$AVDA_{i,t}$	$PVDA_{i,t}$	$NVDA_{i,t}$
H_1: There is an association between fees paid to auditors and accruals quality.	Correlation	N	N	N	N
	OLS Regression	N	N	N	N
	Panel Regression	S (+)	N	S (+)	S (+)
H_2: The relationship between audit fee and accrual quality is moderated by the company's level of corporate governance in terms of board characteristics.	R^2 Test	S	S	S	N
	OLS Regression	N	N	N	N
	Panel Regression	N	S	S	N

(Source: Developed by researchers)
N = not supported
S = supported

According to Alali (2011) and Gul, Chen and Tsui (2003) audit fees exhibit a wide range variation as the standard deviation of the audit fee of both the studies are high. This is consistent with this study as the standard deviation of audit fee was found to be comparatively high. When the level of accruals quality is considered, in a foreign context Gul, Chen and Tsui (2003) state that accruals quality exhibit a wide range of variation which is inconsistent with the findings of this research as the variation was found to be low. However, it is consistent with De Silva, Manawaduge and Ajward (2017) in Sri Lankan context. The level of corporate governance is consistent with the De Silva, Manawaduge and Ajward (2017) in Sri Lankan context.

Through this research it was found that the discretionary accruals and abnormal audit fee are negatively related which suggests that when the audit effort in terms of audit fee increase, the discretionary accruals decrease and thereby the accruals quality increase. Thus, there is a positive relationship between audit fee and accruals quality. According to Mande and Son (2015), there a positive relationship between audit fee and accruals quality and they found that high level of audit fees reflect high audit effort which in turn enhances accruals quality which is consistent with the findings of this research. However, in contrast the findings of Lin, Lin and Chen (2016) state that abnormal audit fees do not reflect auditor`s effort or higher audit quality which is inconsistent with the findings of this research. Further, the findings of the Larcker and Richardson (2004) state that there is a mixed relationship between the audit fee and the four accrual measures which is also inconsistent with the findings of this research.

The findings of this research indicate that a moderate impact of corporate governance on the relationship between audit fee and accruals quality exists in R^2 test of companies categorized as strong, average and weak based on the level of corporate governance and panel regression with interaction variable for certain measures of accruals quality. The results of R^2 is consistent with Larcker and Richardson (2004) as they found that the negative relationship between audit fee and accruals quality is strongest for the cluster of firms with weak corporate governance. However, only three characteristics of corporate governance were used in Larcker and Richardson (2004) whereas ten corporate governance characteristics were used in this research. In contrast, the study conducted by De Silva, Manawaduge and Ajward (2017) to observe relationship between earnings management and corporate governance mechanisms of selected companies in Sri Lankan context, state that only when the board of directors of the company which comprises with more directors with qualifications in accounting and finance, earnings management is less likely to occur.

The hypotheses for this study were developed based on the literature review. However, it is evident from the analysis that the H_1 is supported by the panel regression for three out of four accruals quality measures as a positive relationship between audit fee and accruals quality was found. Further, the H_2 is supported by R^2 test for three accruals quality measures and for two accruals quality measures by the panel regression as a moderate impact of corporate governance on the relationship between audit fee and accruals quality was identified.

5 CONCLUSION, LIMITATIONS AND FUTURE DIRECTIONS

Many corporate scandals have taken place in recent years due to earnings management. The studies indicate that the auditor's effort is vital in reducing the earnings management and that proper implementation of corporate governance practices too would trim the chances for earnings management. Therefore, this study examined whether there is a relationship between auditor's effort in terms of audit fee and the level of accruals quality and how the corporate governance mechanism of the companies moderate this relationship. The sample consisted 98 companies listed in Colombo Stock Exchange (CSE) for the period covering 2015 to 2017 representing the sectors with the highest market capitalization such as Beverage Food and Tobacco, Diversified Holdings, Hotels and Travels and Manufacturing which had accounted for 38% of the total market capitalization of CSE.

This study assessed the level of audit fee, accruals quality and corporate governance and examined the relationship between the audit fee and accruals quality by using correlation analysis, OLS regression and panel regression. Further, the study examined the moderate impact of corporate governance on the relationship between audit fee and accruals quality by using an R^2 test, OLS regression and panel regression. The level of audit fee and corporate governance index showed a comparatively high variation while accruals quality measures showed less variation. The correlation analysis and OLS regression indicated that there is no significance relationship between the audit fee and accruals quality but the panel regression indicated that there is a negative relationship between audit fee and discretionary accruals and thereby that there is a positive relationship between audit fee and accruals quality for three measures of accruals quality. Further, the R^2 test and panel regression indicated that there is a significant moderate impact of corporate governance on the relationship between the audit fee and accruals quality for certain measures of accruals quality.

Therefore, it could be concluded that higher audit effort increases accruals quality and that corporate governance has a moderate impact on this relationship. The above findings are expected to have significant policy implications. The policy makers and regulators should take measures to increase the audit effort required for an audit of a company and should implement mechanisms to improve the level of corporate governance of the companies so that adverse earnings management practices could be curtailed

There are certain limitations in this study, and it is important to state these problems clearly as future researcher will carry out their researches based on prior researches as well as this study results will be used by several parties to take decisions. First, the results are based on Public Listed Companies in Sri Lanka for three year's data, and this limits the ability to generalize the results to other financial periods, other type of businesses as well as other countries. With the exception of the research by Kinney, Palmrose, and Scholz (2003) that uses proprietary data, and data from other countries (e.g., U.K. data used in Antle et al. [2002] and Australian data used in Ruddock, Taylor & Taylor [2003]), this is also a limitation in prior researches. Therefore, this study result can't be used in other counties to take the decision directly due to the differences in regulation and standards. Future researches could incorporate data from more financial periods and include other types of business and other countries as well. Second, despite Modified Jones Model being the most common method used to calculate accruals quality, there are many alternative models available, which future researchers could apply to measure accruals quality. Therefore, there could be a slight

variation in the results if other models were used. Finally, in this study Company's Annual Reports were used to analyse the corporate governance practices of the companies. Thus, here may be some drawbacks due to working with secondary data such as lack of control over data quality and inappropriateness of the data. Further, there could be other board characteristics which could be used to measure corporate governance and future researches can include other corporate governance characteristics.

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APPENDICES

Appendix 1: Sample Selection (Industry wise)

Sector	Companies listed in CSE			Companies with March Y/E Excluding BF&I Sector		
	No.	Market Cap.	Perc. on Market Cap.	No.	Market Cap.	Perc. on Market Cap.
1. Banks finance and insurance	68	613,272,432,461	23.03%	-	-	-
2. Beverage food and tobacco	21	552,941,457,304	20.76%	18	274,531,769,212	21.00%
3. Diversified holdings	19	505,536,322,041	18.98%	19	505,536,322,041	38.67%
4. Hotels and travels	37	307,688,777,120	11.55%	34	105,760,090,239	8.09%
5. Manufacturing	38	164,302,408,278	6.17%	32	119,607,502,608	9.15%
6. Telecommunications	2	152,126,533,977	5.71%	-	-	-
7. Health care	6	57,489,174,208	2.16%	5	43,729,645,815	3.34%
8. Oil palms	5	56,991,440,409	2.14%	5	56,991,440,409	4.36%
9. Land and property	18	49,166,521,024	1.85%	13	10,796,154,530	0.83%
10. Power and energy	8	37,417,724,594	1.41%	8	37,417,724,594	2.86%
11. Construction and engineering	4	35,284,943,104	1.33%	3	29,823,664,880	2.28%
12. Trading	8	26,131,961,260	0.98%	8	26,131,961,260	2.00%
13. Plantations	19	23,674,733,388	0.89%	13	17,796,710,423	1.36%
14. Investment trusts	9	20,536,023,497	0.77%	9	20,536,023,497	1.57%
15. Motors	6	20,474,067,770	0.77%	6	20,474,067,770	1.57%
16. Chemicals and pharmaceuticals	10	15,925,694,946	0.60%	9	15,100,544,946	1.15%
17. Footwear and textiles	3	11,477,151,578	0.43%	3	11,477,151,578	0.88%
18. Stores and supplies	4	6,935,837,604	0.26%	4	6,935,837,604	0.53%
19. Services	8	4,756,635,604	0.18%	8	4,756,635,604	0.36%
20. Information technology	2	730,489,066	0.03%	1	34,340,000	0.00%
	295	2,662,860,329,230	100.00%	198	1,307,437,587,009	100.00%

Appendix 1 shows the sector wise breakup of market capitalization and number of companies for all the companies listed in CSE on 31.03.2017 and companies with 31st December as year-end excluding Banks, Finance and Insurance Sector. The sectors selected as the sample are highlighted.

Appendix 2: Companies included in the sample

Company	Sector	Market Capitalisation	
1. John Keells Holdings PLC	Diversified Holdings	191,331,718,192	7.19%
2. Melstacorp PLC*	Diversified Holdings	68,991,506,662	2.59%
3. Hemas Holdings PLC	Diversified Holdings	62,256,127,863	2.34%
4. Carson Cumberbatch PLC	Diversified Holdings	32,050,344,365	1.20%
5. C T Holdings PLC	Diversified Holdings	27,263,180,972	1.02%
6. Aitken Spence PLC	Diversified Holdings	22,816,977,729	0.86%
7. Hayleys PLC	Diversified Holdings	19,875,000,000	0.75%
8. Vallibel One PLC	Diversified Holdings	19,014,788,678	0.71%
9. Richard Pieris And Company PLC	Diversified Holdings	16,890,817,683	0.63%
10. Expolanka Holdings PLC	Diversified Holdings	11,729,490,000	0.44%
11. Softlogic Holdings PLC	Diversified Holdings	9,270,100,000	0.35%
12. Sunshine Holdings PLC	Diversified Holdings	6,229,999,455	0.23%
13. Browns Investments PLC	Diversified Holdings	5,208,000,000	0.20%
14. Taprobane Holdings PLC	Diversified Holdings	4,010,899,260	0.15%
15. The Colombo Fort Land & Building PLC	Diversified Holdings	3,258,000,000	0.12%
16. Dunamis Capital PLC	Diversified Holdings	2,521,439,525	0.09%
17. Browns Capital PLC	Diversified Holdings	2,052,000,000	0.08%
18. Adam Investments PLC*	Diversified Holdings	539,131,440	0.02%
19. Adam Capital PLC	Diversified Holdings	226,800,218	0.01%
20. Ceylon Cold Stores PLC	Beverage Food And Tobacco	77,077,440,000	2.89%
21. Distilleries Company Of Sri Lanka PLC	Beverage Food And Tobacco	71,130,000,000	2.67%
22. Cargills (Ceylon) PLC	Beverage Food And Tobacco	42,044,800,000	1.58%
23. Lion Brewery Ceylon PLC	Beverage Food And Tobacco	36,800,000,000	1.38%
24. Ceylon Beverage Holdings PLC	Beverage Food And Tobacco	12,592,854,000	0.47%
25. Dilmah Ceylon Tea Company PLC	Beverage Food And Tobacco	11,998,000,000	0.45%
26. Lanka Milk Foods (CWE) PLC	Beverage Food And Tobacco	4,679,766,000	0.18%
27. Keells Food Products PLC	Beverage Food And Tobacco	3,697,500,000	0.14%
28. Kotmale Holdings PLC	Beverage Food And Tobacco	2,838,560,000	0.11%
29. Harischandra Mills PLC	Beverage Food And Tobacco	2,687,344,020	0.10%
30. Bairaha Farms PLC	Beverage Food And Tobacco	2,563,200,000	0.10%
31. Renuka Foods PLC	Beverage Food And Tobacco	2,123,281,908	0.08%
32. Renuka Agri Foods PLC	Beverage Food And Tobacco	1,572,900,000	0.06%
33. Convenience Foods (Lanka)PLC	Beverage Food And Tobacco	852,500,000	0.03%
34. Tea Smallholder Factories PLC	Beverage Food And Tobacco	720,000,000	0.03%
35. Raigam Wayamba Salterns PLC	Beverage Food And Tobacco	564,414,640	0.02%
36. Lucky Lanka Milk Processing Company PLC	Beverage Food And Tobacco	316,851,138	0.01%
37. HVA Foods PLC	Beverage Food And Tobacco	272,357,506	0.01%
38. Teejay Lanka PLC	Manufacturing	25,847,935,080	0.97%
39. Tokyo Cement Company (Lanka) PLC	Manufacturing	13,587,750,000	0.51%
40. Royal Ceramics Lanka PLC	Manufacturing	13,183,936,696	0.50%
41. ACL Cables PLC	Manufacturing	6,528,411,120	0.25%
42. Alumex PLC	Manufacturing	5,686,753,960	0.21%

43. Lanka Tiles PLC	Manufacturing	5,411,141,820	0.20%
44. Piramal Glass Ceylon PLC	Manufacturing	5,320,482,048	0.20%
45. Lanka Walltiles PLC	Manufacturing	5,077,800,000	0.19%
46. Dipped Products PLC	Manufacturing	4,549,474,912	0.17%
47. Kelani Tyres PLC	Manufacturing	4,422,000,000	0.17%
48. Ceylon Grain Elevators PLC	Manufacturing	4,134,000,000	0.16%
49. Lanka Ceramic PLC	Manufacturing	3,450,000,000	0.13%
50. Printcare PLC	Manufacturing	2,974,446,782	0.11%
51. Kelani Cables PLC	Manufacturing	2,561,500,000	0.10%
52. Richard Pieris Exports PLC	Manufacturing	2,333,222,705	0.09%
53. Swisstek (Ceylon) PLC	Manufacturing	1,795,603,200	0.07%
54. Swadeshi Industrial Works PLC	Manufacturing	1,763,991,000	0.07%
55. Sierra Cables PLC	Manufacturing	1,612,537,290	0.06%
56. Pelwatte Sugar Industries PLC*	Manufacturing	1,597,456,939	0.06%
57. Agstar PLC	Manufacturing	1,322,363,133	0.05%
58. Dankotuwa Porcelain PLC	Manufacturing	975,317,520	0.04%
59. Lanka Aluminium Industries PLC	Manufacturing	929,051,399	0.03%
60. Central Industries PLC	Manufacturing	869,810,832	0.03%
61. ACL Plastics PLC	Manufacturing	774,678,750	0.03%
62. Hayleys Fibre PLC	Manufacturing	474,400,000	0.02%
63. Abans Electricals PLC	Manufacturing	450,751,392	0.02%
64. Laxapana Batteries PLC	Manufacturing	448,500,000	0.02%
65. Samson International PLC	Manufacturing	418,621,052	0.02%
66. Orient Garments PLC*	Manufacturing	384,416,592	0.01%
67. Alufab PLC	Manufacturing	337,629,600	0.01%
68. Acme Printing & Packaging PLC	Manufacturing	197,577,182	0.01%
69. Blue Diamonds Jewellery Worldwide PLC	Manufacturing	185,941,604	0.01%
70. Asian Hotels & Properties PLC	Hotels And Travels	24,574,029,150	0.92%
71. Trans Asia Hotels PLC	Hotels And Travels	15,020,000,000	0.56%
72. John Keells Hotels PLC	Hotels And Travels	14,561,467,800	0.55%
73. Aitken Spence Hotel Holdings PLC	Hotels And Travels	11,837,408,352	0.44%
74. The Kingsbury PLC	Hotels And Travels	3,751,000,000	0.14%
75. Amaya Leisure PLC	Hotels And Travels	3,309,751,069	0.12%
76. Tal Lanka Hotels PLC	Hotels And Travels	2,932,387,374	0.11%
77. The Nuwara Eliya Hotels Company PLC	Hotels And Travels	2,905,010,339	0.11%
78. The Kandy Hotels Company (1938) PLC	Hotels And Travels	2,887,500,000	0.11%
79. Browns Beach Hotels PLC	Hotels And Travels	2,760,480,000	0.10%
80. The Lighthouse Hotel PLC	Hotels And Travels	2,254,000,000	0.08%
81. Renuka City Hotel PLC	Hotels And Travels	2,061,500,000	0.08%
82. Serendib Hotels PLC	Hotels And Travels	1,744,390,448	0.07%
83. The Fortress Resorts PLC	Hotels And Travels	1,286,285,534	0.05%
84. Tangerine Beach Hotels PLC	Hotels And Travels	1,190,000,000	0.04%
85. Eden Hotel Lanka PLC	Hotels And Travels	1,151,040,000	0.04%
86. Royal Palms Beach Hotels PLC	Hotels And Travels	1,095,000,000	0.04%
87. Palm Garden Hotels PLC	Hotels And Travels	1,042,734,700	0.04%

88. Dolphin Hotels PLC	Hotels And Travels	996,076,526	0.04%
89. Pegasus Hotels Of Ceylon PLC	Hotels And Travels	987,724,985	0.04%
90. Mahaweli Reach Hotels PLC	Hotels And Travels	894,262,493	0.03%
91. Hikkaduwa Beach Resort PLC	Hotels And Travels	759,975,440	0.03%
92. Citrus Leisure PLC	Hotels And Travels	676,552,989	0.03%
93. Anilana Hotels And Properties PLC	Hotels And Travels	641,301,068	0.02%
94. Waskaduwa Beach Resort PLC	Hotels And Travels	605,240,745	0.02%
95. Beruwala Resorts PLC	Hotels And Travels	600,000,000	0.02%
96. Hotel Sigiriya PLC	Hotels And Travels	570,080,700	0.02%
97. Sigiriya Village Hotels PLC	Hotels And Travels	535,500,000	0.02%
98. Marawila Resorts PLC	Hotels And Travels	478,800,000	0.02%
99. Bansei Royal Resorts Hikkaduwa PLC	Hotels And Travels	456,688,000	0.02%
100. Kalpitiya Beach Resort PLC	Hotels And Travels	435,240,027	0.02%
101. Ramboda Falls PLC	Hotels And Travels	328,000,000	0.01%
102. Hunas Falls Hotels PLC	Hotels And Travels	260,437,500	0.01%
103. Miramar Beach Hotel PLC*	Hotels And Travels	170,225,000	0.01%
		1,005,435,684,100	**37.76%**

*missing data