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# Corporate Governance Mechanisms and Corporate Tax Avoidance: Evidence from Listed Commercial Banks in Bangladesh

Md. Amzad Hossain[1]

**Abstract**

*This research aims to explore the effect of corporate governance mechanisms on corporate tax avoidance in the banking sector of Bangladesh. The estimation method is a Random Effects model using a balanced panel of 29 listed commercial banks for the period 2019-2024, along with cluster-robust standard errors. To assess the robustness of the results, Fixed Effects with cluster-robust standard errors and Feasible Generalized Least Squares (FGLS) are estimated. Book-tax differences (BTD) are used to measure corporate tax avoidance, and the governance variables are related to board composition, expertise, ownership structure and the characteristics of the audit committee. The results suggest that the presence of a lawyer on board and an accounting expert on the audit committee is positively related to tax avoidance, while foreign ownership and firm age are negatively related to tax avoidance. Additionally, the size and leverage of the firms and their profitability greatly affect corporate tax behavior, whereas some of the traditional governance characteristics, such as the board size, board independence, and female board representation, and board political affiliation, do not have consistent effects. The study is a significant addition to the literature of corporate governance and taxation as it gives fresh inputs based on the recent evidence from the banking industry of Bangladesh and illustrates that the quality of the corporate governance has a relationship not with the structure of the board of directors but also with the knowledge and skill of the people who are involved in the governance of the firm's financial decisions.*

**Keywords**: Corporate Governance Mechanism, Tax avoidance, Commercial banks, FGLS, Bangladesh.

[1] Assistant Professor, Department of Economics & Banking, International Islamic University Chittagong, Bangladesh. Email: amzad@iiuc.ac.bd

## 1. INTRODUCTION

Along with income tax revenue, corporate tax represents a major stream of government revenue. But, governments around the world are still losing significant revenues as many corporations engage in tax planning to reduce tax liabilities (Slemrod, 2004; Hundal, 2011). The avoidance of tax through a legal or quasi-legal method that is designed to take advantage of loopholes and ambiguities in tax law is known as corporate tax avoidance (Freedman, 2008). Although there is clear distinction between illegal tax evasion and legal tax avoidance, aggressive tax planning is harmful which weakens the tax structure while reducing government revenue and corporate transparency (Desai et al., 2004; Sandmo, 2005). This has led to growing focus by governments, tax authorities, investors and academic researchers on corporate tax avoidance. The increasing attention to corporate tax avoidance has led to a change of emphasis from taxation itself to the mechanisms of governance that affect business decisions in tax planning. In the agency theory framework, managers can also resort to tax aggressiveness as a means to achieve the greater shareholder value, as well as to serve their own interests with the use of ambiguous financial statements and complicated organization (Desai & Dharmapala, 2006; Crocker & Slemrod, 2005). Aggressive tax planning can involve hiding the benefits of the planning and create agency problems (Desai et al., 2004). Hence corporate governance is believed to be important in establishing the right kind of incentives for managers and ensure that tax planning activities are consistent with long term corporate goals. Corporate governance is a collection of mechanisms designed to encourage managerial accountability, transparency and good management (Bhagat & Bolton, 2008). Governance attributes such as board independence, board size, audit committee effectiveness, ownership structure and the quality of the external audit should help to enhance internal monitoring and limit managerial opportunism (Fama & Jensen, 1983; Annisa & Kurniasih, 2012). Good governance can help to deter managers from becoming overly aggressive with tax avoidance through improved disclosure in the financial statements and increased board oversight (Desai et al., 2004). Others, however, say that effective management of a company can lead to a more efficient tax planning process that can bring the highest returns after tax to the shareholder without breaking the law (Minnick & Noga, 2010; Armstrong et al., 2015). The resulting conflicting views have yielded mixed empirical evidence on the association between corporate governance and corporate tax avoidance. Banking is one niche that provides an interesting backdrop to this relationship. Banks are considered one of the most highly regulated entities in any economy since they are responsible for public deposits, financial intermediation and are a key source of economic stability. Their governance frameworks are thus more heavily regulated than those of non-financial companies. Banking sector is one of the biggest sources of corporate income tax revenue in Bangladesh and an indispensable source of support to national economic development. The systemic importance of banks in tax avoidance might have wider consequences for fiscal sustainability, regulatory compliance and the legitimacy of the financial system. Although the literature for tax avoidance and corporate governance is growing around the world, empirical studies on corporate governance in Bangladesh are limited. The majority of the previous literature has focused on developed economies or manufacturing units, and a few have looked at the performance of listed commercial banks in developing economies. In addition, previous research tended to examine specific governance mechanisms as opposed to a governance system (Minnick & Noga, 2010; Armstrong et al., 2015). The differences in institutional setting, ownership and regulation of the Bangladesh banking sector make it difficult to draw conclusions from evidence in developed countries. This disparity suggests the need for empirical study. This study focuses on the impact of corporate governance mechanism on corporate tax avoidance in banking sector of Bangladesh. The results will contribute to useful information for the banking industry regulators, policymakers, tax authorities, investors and bank management to enhance the quality of governance and increase tax compliance in the banking sector of Bangladesh. The literature review of the paper is presented in the following section 2. Data, variables and econometric methods are described in Section 3. Empirical results are presented in Section 4, and Section 5 describes limitations and future scope of research.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Tax avoidance has become a major focus of research in the accounting and corporate governance literature because it is an area where firms' financial aims and the wider duties to other stakeholders intersect. While tax avoidance in general is a tax planning measure to legally lower tax obligations, the implications of tax avoidance go beyond just tax savings. While aggressive tax planning could potentially boost firm value, aggressive tax planning might also result in regulatory attention, reputational issues, and agency conflicts (Hanlon & Heitzman, 2010). Consequently, previous researches examine the impact of corporate governance on managers’ tax avoidance tendency. The agency theory is the main theory used to elucidate the connection between corporate governance and tax avoidance. Jensen and Meckling (2019) believe that agency problems arise between shareholders and managers because of the separation of business operations. Shareholders tend to have the goal of maximizing firm value, while managers may have other goals that may not be aligned with shareholders. Lower taxes lead to higher after-tax profits for the firm and could improve shareholder value. However, complex tax strategies tend to involve complicated transactions, which lead to management discretion and the potential for managers to mask their opportunistic behavior and benefit themselves (Desai & Dharmapala, 2006). Tax avoidance is not merely a matter of tax management; it is fundamentally a governance problem (Desai &

Dharmapala, 2006). Effective corporate governance may ensure an efficient tax planning framework that supports shareholders' goals. By contrast, weak governance can enable managers to employ aggressive tax strategies for their own benefit, lowering the value of tax savings. This perspective has changed the tax avoidance research focus from only financial determinants to governance-related determinants.

Following this empirical research, there are mixed findings on the governance–tax avoidance link. Others suggest that more effective governance leads to a reverse effect on aggressive tax avoidance by making boards more effective, internal control tighter, and financial reporting more transparent (Lanis & Richardson, 2011; Richardson, Taylor, & Lanis, 2013). Effective governance structures limit managerial discretion and enhance accountability, in turn, making it harder for managers to pursue excessively aggressive tax strategies. Other research indicates that efficient decision-making drives tax planning when it increases firm value without crossing legal boundaries. Good governance enhances tax efficiency, thereby leading to lower effective tax rates (Minnick & Noga, 2010). Tax avoidance is influenced by various governance mechanisms, implying that governance can aid in effective tax planning as well as restrict it (Armstrong et al., 2015). The results are mixed, suggesting that the impact of corporate governance on tax avoidance is not robust. The variations in the legal system, investor protection, ownership concentration, and institutional environment may be the reasons why governance mechanisms vary across countries (Hanlon & Heitzman, 2010).

The banking sector of Bangladesh is obliged to follow the corporate governance guidelines of the "Bangladesh Securities Exchange Commission". Meanwhile, banks are a major source of the remobilization of financial resources and are a significant source of government revenue. Aggressive tax avoidance demonstrated by banks could have more systemic implications than just for the institutions involved, influencing public trust, financial stability and the fiscal capacity of governments. Regulators, investors and policymakers may, therefore, find it relevant to understand if and how corporate governance mechanisms are being effective in curbing tax avoidance in this sector. In Bangladesh, the majority of the existing studies are either on non-financial firms or developed economies where the institutional characteristics are very different from those of Bangladesh. Moreover, previous research tends to focus on one governance mechanism at a time, which may not offer a good basis for assessing the interaction of several governance attributes in affecting tax avoidance decisions. To fill this void, the current paper explores some features of the board and ownership to gain a holistic view of the governance–tax avoidance nexus in Bangladesh's listed commercial banks.

### *2.1 Board Characteristics and Corporate Tax Avoidance*

The board of directors is assigned to oversee managerial decisions and safeguard shareholders' interests. An effective board, from an agency theory point of view, can help to mitigate managerial opportunism through greater monitoring and accountability (Fama & Jensen, 1983; Jensen & Meckling, 2019). Board characteristics are likely to affect managers' tax planning behavior, because tax avoidance by the company is a strategic financial decision that can cause the company to be exposed to regulatory and reputational risks. In corporate governance literature, board size has been a focal point of discussion. Smaller boards tend to be more effective in communicating, coordinating, and making decisions, while larger boards could cause coordination issues and less monitoring (Jensen, 1993; Yermack, 1996). If a board is working well, they are expected to deter managers from taking too extreme of steps in preparing for tax avoidance. But, there is no empirical evidence. According to Minnick and Noga (2010) a positive relationship exists between tax aggressiveness and board size, while Lanis and Richardson (2011) find that board size has a negative relation to tax avoidance. This study predicts that larger boards will be more active in monitoring tax decisions because of the role of the board and the highly regulated banking industry.

*$H_1$: Board size is negatively associated with corporate tax avoidance.*

Another critical governance process involved in strengthening the board is board independence. Independent directors are supposed to be able to offer impartial opinions, minimize agency issues, and enhance managerial oversight (Fama & Jensen, 1983). Independent directors are less subject to management pressure and are more likely to be skeptical of aggressive tax strategies that could put companies at risk of legal or reputational liability (Lanis & Richardson, 2011). However, results have been inconsistent in the past. Studies by other authors have indicated that greater board independence would be detrimental to tax avoidance as it increases transparency and accountability, whereas Armstrong et al. (2015) have claimed that such directors can help to achieve efficient tax planning, which is beneficial for maximizing shareholder value (Minnick & Noga, 2010). This study investigates the effect of board independence on the level of tax avoidance in the firm following the monitoring framework of agency theory.

*$H_2$: Board independence is negatively associated with corporate tax avoidance.*

Gender diversity on boards has gained a notable attribute of good governance. Women directors appear to be more prone to a higher degree of ethical standards, risk aversion, and careful scrutiny of management decisions. The previous researches indicate that a diverse board of directors increases transparency and is likely to discourage opportunistic corporate activities such as aggressive tax planning (Demirgüç-Kunt & Huizinga, 2001; Salihu et al., 2015). Thus, companies with higher female board diversity should engage in less aggressive tax avoidance.

*$H_3$: Female board representation is negatively associated with corporate tax avoidance.*

Foreign board members can bring in experience in international direction, wider business experience, and better governance to the corporate boards. They add value to monitor and improve adherence to international governance standards. But foreign directors may also have more knowledge of more advanced tax planning strategies and multinational business structures, which may make more aggressive tax planning possible. While the evidence is mixed, a few studies have suggested that companies with foreign directors engage in more tax avoidance. This argument leads to the following hypothesis: the role of school librarians as designers of the school library environment will shift from the traditional physical setting to the evolving digital environment.

*$H_4$: Foreign board membership is positively associated with corporate tax avoidance.*

### 2.2 Board Expertise and Corporate Tax Avoidance

In addition to composition, the professional skill and knowledge of board members are also important determinants of board outcomes. Directors who have financial and/or accounting experience are better able to assess complex financial reporting matters, tax-related risks, and managerial decisions. This expertise helps the board recognize aggressive tax planning techniques that could lead to regulatory action or harm the firm's reputation. The use of accounting expertise can help the board better separate efficient tax planning from too much tax avoidance, according to Robinson et al. (2012). Likewise, Kusnadi et al. (2016) find that board monitoring has the effect of improving the quality of financial reporting. While some studies indicate that wealthy directors might facilitate better tax planning for increasing shareholder value (Al-Shaer & Zaman, 2018), agency theory would indicate that financial sophistication would be expected to more effectively monitor and decrease managerial opportunism. Based on this, this study hypothesizes that the more knowledgeable a firm's board of directors is in accounting, the less likely they are to engage in aggressive tax avoidance.

*$H_5$: Board accounting expertise is negatively associated with corporate tax avoidance.*

### 2.3 Audit Oversight and Corporate Tax Avoidance

The audit committee is another key governance body for maintaining financial statement integrity and enhancing internal control processes. A well-designed audit committee helps to improve transparency in these ways: it oversees the financial disclosures, monitors compliance with accounting standards, and ensures good communications between management and external auditors (Beasley, 1996; Abbott et al., 2004). Well-functioning audit committees should help discourage aggressive tax planning, as such practices tend to be closely connected with financial reporting practices. Past research typically finds positive associations between the quality of audit committees and the quality of financial reporting and management opportunism. While Damayanti (2018) does not provide any evidence of a relationship between audit committee characteristics and tax avoidance, the overall evidence indicates that audit committee effectiveness has a positive impact on corporate accountability and reduces excessive tax avoidance. It is hypothesized, therefore, that the following conditions would occur.

> *$H_6$: Audit committee accounting expertise is positively associated with corporate tax avoidance.*

### *2.4 Ownership Structure and Corporate Tax Avoidance*

The role of ownership structure in corporate governance is well understood because it affects the degree of managerial decisions' monitoring by shareholders. The ownership structure has been much discussed in the corporate governance literature because institutional owners are believed to be able to monitor effectively and thus mitigate agency conflicts. Generally speaking, institutional investors have higher levels of financial expertise, information, and incentives to monitor management than individual shareholders (Shleifer & Vishny, 1986). Consequently, enterprises with more institutional shareholders are likely to receive more close attention to their decisions, such as corporate tax planning. Institutional investors can reduce managerial opportunism by demanding higher transparency and accountability of financial reporting from agencies from an agency theory point of view. It will also make managers wary of implementing overly aggressive tax strategies that could result in reputational, legal, or regulatory consequences for the firm. The empirical evidence indicated that high institutional ownership levels are associated with better corporate governance and managerial performance and that institutional ownership and the quality of managerial performance are positively related (Annisa & Kurniasih, 2012). However, the evidence is mixed at present. Some authors have stated that institutional investors encourage better tax planning and deter tax evasion by monitoring, while some have claimed that some of these types of investors may allow tax evasiveness when it leads to increases in shareholder returns. Yet there are some distinct opinions regarding the monitoring approach, especially in regulated sectors like banking, where regulatory requirements and transparency are paramount. In the case of Bangladeshi listed banks, therefore, a higher institutional ownership is expected to reduce managers' incentives to engage in aggressive tax avoidance.

> *$H_7$: Institutional ownership has a negative relation with corporate tax avoidance.*

### *2.5 External Audit Quality and Corporate Tax Avoidance*

External audit serves as an effective corporate governance mechanism for ensuing credibility of financial reporting, which decreases information asymmetry. The high-quality auditor should be expected to add to the integrity of financial reporting by identifying material misstatements, achieving compliance with accounting standards, and deterring opportunistic management activity (DeAngelo, 1981). External auditors also have a monitoring function from the perspective of corporate taxation, assessing the reasonableness of accounting treatments for taxes and looking for aggressive tax strategies that could create legal or reputational issues. Engagement with a Big4 audit firm is typically used as an indicator of audit quality because Big4 firms tend to be more knowledgeable, have better reputational incentives and better quality control structures than non-Big4 firms (Kanagaretnam et al., 2016). Generally, Big4 audit firms do not allow aggressive tax due to potential reputational and litigation risk (Zimmerman, 1983). The empirical evidence is in line with this, as companies certified by the Big4 tend to be less tax aggressive and have better reporting characteristics (Richardson, Taylor, & Lanis, 2013; Kanagaretnam et al., 2016). Some research found that there is no significant relationship between audit quality and tax avoidance (Boussaidi & Hamed, 2015), but the majority of the literature indicated that good external audit improves corporate transparency and restricts aggressive tax planning.

> *$H_8$: Engagement with Big4 audit firms is negatively associated with corporate tax avoidance.*

## 3. METHODOLOGY

### *3.1 Sample and Data Collection*

Balanced panel data is used for this study, containing 174 bank-year observations of 29 commercial banks listed at the Dhaka Stock Exchange (DSE) in the time frame 2019-2024. The sample was chosen because there was availability of the annual reports and their completeness over the study period. Data pertaining to financial governance and financial information were manually extracted from the annual reports of the respective banks published on the internet. The chosen time frame reflects the latest trends in corporate governance practices and tax reporting in Bangladesh, making it an appropriate time to explore the link between corporate governance mechanisms and corporate tax avoidance.

### *3.2 Variable Measurement*

Corporate tax avoidance is measured by “Book-Tax Difference (BTD)”, which is a proxy for firms' tax planning activities (Desai & Dharmapala, 2006; Hanlon & Heitzman, 2010). The independent variables capture different dimensions of corporate governance, including board characteristics, board expertise, audit committee attributes, ownership structure, and external audit quality. In addition, firm size, leverage, profitability, firm age, and year effects are included as control variables to account for firm-specific characteristics that may influence corporate tax avoidance. A detailed description of all variables and their measurements is presented in Table 1.

Table-1: Variable Measurements

| **Variable Types** | **Variables Name** | **Variables Symbol** | **Variables Explanation** |
|---|---|---|---|
| Dependent Variable | Corporate Tax Avoidance | BTD | “Corporate tax avoidance is measured using Book-Tax Difference (BTD), which is one of the most widely used proxies in the tax avoidance literature (Hanlon & Heitzman, 2010). BTD captures the difference between accounting income reported for financial reporting purposes and taxable income reported for tax purposes.” |
| Independent Variables | Board Size | $B_i$ | “Number of Board Member” |
| | Independent Board Member | IBM | “Number of Independent Board Member” |
| | Female Board Member | FBM | “Number of Female member in the Board” |
| | Foreign Board Member | FoBM | “Number of Foreign member in the Board” |
| | Law Expert | LawEx | "Presence of legal experts on the board (1 = Yes, 0 = No)." |
| | Accounting Expert | AE | “Number of accounting experts in the board” |
| | Politically connected Board Member | PBM | “Number of political board member in the board” |
| | Audit Committee | ACTM | “Number of the member of audit committee” |
| | Audit Committee Accounting Expert | ACAE | “Number of accounting expert in the audit committee” |
| | Political Director | PL | "Interaction effect between political connected directors and legal expertise (1 = Joint presence, 0 = No joint presence)" |
| | Institutional Share | IS | “Proportion of institutional ownership in a firm” |
| | Director Share | DS | “Proportion of director ownership in a firm” |
| | Public Share | PS | “Proportion of public ownership in a firm” |
| | Government Share | GS | “Proportion of Government ownership in a firm” |
| | Global Reporting Initiative | GRI | “Equals 1 if the bank prepares its sustainability report in accordance with the Global Reporting Initiative (GRI) guidelines; 0 otherwise.” |
| | External Audit Quality | BIG4 | “Equals 1 if the bank is audited by a Big Four |

| | | | |
|---|---|---|---|
| | | | audit firm; 0 otherwise.” |
| Control Variables | Return Equity | ROE | “Net Income after tax divided by the total equity” |
| | Age | AGE | “Total year of operations” |
| | Leverage | LEVA | “Total debt divided by the total assets” |
| | Total Asset | SIZE | “Log of total assets.” |
| | Return on Asset | ROA | “Profit after tax divided by the total assets” |
| | Year | YEAT | “Year dummy” |

*3.3 Empirical Model*

This study utilizes a panel data regression to examine the link between corporate governance mechanisms and firm tax avoidance. The Random Effects model with cluster-robust standard errors is used as the main estimation method and the Fixed Effects model and the Feasible Generalized Least Squares (FGLS) are used as robustness checks, based on the results of Hausman specification test. The empirical model is given by:

$$BTD_{it} = \beta_o + \sum_{k=1}^{21} \beta_k X_{kit} + \sum_{t=2019}^{2024} Year_t + \mu_i + €_{it}$$

## 4. RESULT AND DISCUSSION

Descriptive statistics of the variables are given in Table 2, which provides data from 174 firm-year observations from 29 listed commercial banks during 2019-2024. The tax avoidance has a high level of variation both between the banks and across time, as the mean of the book-tax difference (BTD) is negative with a standard deviation of 3726.10 million BDT. Further, the range is very wide, from a minimum of −29,007 million to a maximum of 9,460 million BDT. In terms of the governance features of the companies, the average board size is about 13 (mean = 12.95) members of the board, ranging from 5 to 21 members. Average banks have 2.67 independent directors on their boards, and 1.55 female directors, foreign directors are relatively rare with average of only 0.17 per bank board. The mean values of accounting experts (1.16), politically connected directors (1.84), audit committee members (4.12), and audit committee accounting experts (0.91) suggest significant differences in the composition of boards across the sample. In addition, approximately 40.2% of the observations are related to politically linked banks, while 36.8% are audited by Big Four audit firms. The high mean GRI score (0.99) indicates that almost all sampled banks publish sustainability information. The control variables also have a reasonably wide range of variation. The average age of banks is 28.5 years and the average size is 5.64 (natural log of total assets). The mean leverage ratio is 0.96 and the average profitability is 7.04 % ROE and

0.53 % ROA. The descriptive statistics reveal that the cross-sectional and temporal variation of the governance and financial variables are satisfactory for the further panel regression analysis.

Table 2: Descriptive Statistics

| Variables | Obs | Mean | Std. dev. | Min | Max |
|---|---|---|---|---|---|
| BTD | 174 | -1111.74 | 3726.097 | -29007 | 9460 |
| BS | 174 | 12.94828 | 4.353282 | 5 | 21 |
| IBM | 174 | 2.672414 | 1.102618 | 1 | 7 |
| FBM | 174 | 1.545977 | 1.362445 | 0 | 5 |
| FoBM | 174 | 0.166667 | 0.388912 | 0 | 2 |
| LawEx | 174 | 0.45977 | 0.522435 | 0 | 2 |
| AE | 174 | 1.155172 | 1.027963 | 0 | 4 |
| PBM | 174 | 1.844828 | 1.735069 | 0 | 8 |
| ACTM | 174 | 4.12069 | 1.038188 | 2 | 6 |
| ACAE | 174 | 0.913793 | 0.865882 | 0 | 4 |
| PL | 174 | 0.402299 | 0.491777 | 0 | 1 |
| DS | 174 | 36.32362 | 15.95769 | 0 | 86.99 |
| GS | 174 | 4.292644 | 17.37412 | 0 | 91.19 |
| IS | 174 | 24.22011 | 11.90194 | 3.29 | 74.68 |
| FS | 174 | 2.943046 | 7.326066 | 0 | 43.48 |
| GRI | 174 | 0.988506 | 0.106901 | 0 | 1 |
| BIG4 | 174 | 0.367816 | 0.483603 | 0 | 1 |
| AGE | 174 | 28.5 | 7.31911 | 18 | 43 |
| SIZE | 174 | 5.636029 | 0.296315 | 4.696574 | 6.818961 |
| LEV | 174 | 0.955167 | 0.650908 | 0.0557 | 9.212109 |
| ROE | 174 | 7.040925 | 16.76985 | -131.14 | 26.1 |
| ROA | 174 | 0.530264 | 0.829557 | -5.99 | 1.7 |

Source: Author's Calculation

The pairwise correlation coefficients of the study variables are presented in Table 3. Overall, the correlations suggest that there are no serious concerns of multi-collinearity, with the highest correlation being 0.896 between legal expertise (LawEX) and political linkage (PL). This value is still less than the commonly used value of 0.90, which indicates that the regression model can be constructed with all the explanatory variables. The VIF results also corroborate the above conclusion with a mean value of 2.97.nIn terms of the dependent variable, BTD is significantly negatively correlated with accounting expertise (AE) (r =

−0.204, p < 0.01) and political board members (PBM) (r = −0.126, p < 0.10), meaning that more accounting expertise and political representation on the board are linked to lower book-tax differences. However, BTD is positively and strongly associated with return on equity (ROE) (r = 0.431, p< 0.01) and return on assets (ROA) (r = 0.593, p< 0.01) in the case of BTD, whereas the more profitable banks tend to report larger book-tax differences. The other governance variables show rather weak and insignificant bivariate relationships with BTD. There are some moderate relationships between the explanatory variables. The number of board members (BS) is also positively related to independent board members (IBM), accounting expertise (AE), political board members (PBM), audit committee members (ACTM), and audit committee accounting expertise (ACAE). Likewise, there is strong correlation between ACTM and BS (r = 0.672, p < 0.01), as well as between ACAE and AE (r = 0.671, p < 0.01), indicating a complementary relationship between the types of governance mechanisms. ROE and ROA are highly correlated with each other (r = 0.887, p < 0.01), but the correlation is not high enough to reach the severe multicollinearity threshold. In general, the correlation coefficient matrix indicates there are no serious relationships among the independent variables to affect the regression estimates to be made later on.

Table 3: Correlation Matrix

| **Variables** | **BTD** | **BS** | **IBM** | **FBM** | **FOBM** | **LAWEX** | **AE** | **PBM** | **ACTM** | **ACAE** | **PL** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **BTD** | 1.000 | | | | | | | | | | |
| **BS** | -0.029 | 1.000 | | | | | | | | | |
| **IBM** | -0.105 | 0.186** | 1.000 | | | | | | | | |
| **FBM** | 0.073 | 0.148* | 0.131* | 1.000 | | | | | | | |
| **FOBM** | -0.070 | -0.063 | -0.088 | -0.042 | 1.000 | | | | | | |
| **LAWEX** | -0.067 | -0.078 | -0.008 | 0.100 | 0.190** | 1.000 | | | | | |
| **AE** | -0.204*** | 0.229*** | 0.280*** | 0.137* | 0.065 | 0.114 | 1.000 | | | | |
| **PBM** | -0.126* | 0.382*** | -0.042 | -0.035 | 0.030 | 0.162** | 0.078 | 1.000 | | | |
| **ACTM** | -0.065 | 0.672*** | 0.100 | 0.215*** | -0.022 | 0.078 | 0.210*** | 0.242*** | 1.000 | | |
| **ACAE** | -0.082 | 0.186** | 0.140* | 0.055 | -0.009 | 0.037 | 0.671*** | 0.164** | 0.256*** | 1.000 | |
| **PL** | -0.090 | -0.039 | 0.010 | 0.041 | 0.071 | 0.896*** | 0.082 | 0.284*** | 0.108 | 0.014 | 1.000 |

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Source: Author's Calculation

| **Variables** | **DS** | **GS** | **IS** | **FS** | **GRI** | **BIG4** | **AGE** | **SIZE** | **LEV** | **ROE** | **ROA** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **DS** | 1.000 | | | | | | | | | | |
| **GS** | -0.539*** | 1.000 | | | | | | | | | |
| **IS** | -0.305*** | -0.310*** | 1.000 | | | | | | | | |
| **FS** | 0.099 | -0.091 | -0.158** | 1.000 | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **GRI** | -0.044 | 0.027 | 0.107 | -0.131 | 1.000 | | | | | | |
| **BIG4** | 0.367*** | -0.186** | -0.116 | 0.291*** | -0.141 | 1.000 | | | | | |
| **AGE** | -0.462*** | 0.266*** | 0.165** | -0.060 | -0.022 | -0.080 | 1.000 | | | | |
| **SIZE** | 0.178** | -0.492*** | 0.218*** | 0.242*** | -0.044 | 0.092 | 0.069 | 1.000 | | | |
| **LEV** | 0.056 | 0.003 | -0.098 | 0.210*** | 0.002 | 0.075 | 0.124 | 0.154** | 1.000 | | |
| **ROE** | 0.246*** | -0.066 | -0.097 | 0.075 | -0.015 | 0.137* | -0.258*** | -0.059 | -0.030 | 1.000 | |
| **ROA** | 0.290*** | -0.115 | -0.142* | 0.158** | 0.000 | 0.191** | -0.306*** | -0.002 | -0.055 | 0.887*** | 1.000 |

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Source: Author's Calculation

The variance inflation factor (VIF) results are displayed in Table 4, which helped to evaluate the multicollinearity of the explanatory variables. The mean value of VIF is 2.97, well below the standard of 10, suggesting that multicollinearity is not a big problem in the estimated model. Individual VIF values are in the range of 1.18 to 7.57. Political linkage (PL) and legal expertise (LawEx) are the two variables with the highest VIF values (7.57 and 6.98) but they are still below the critical level. Likewise, the values of ROA (5.92) and ROE (5.47) have relatively high VIF values, which is expected since they are alternative measures of profitability of banks, but the values are still acceptable. The overall VIF result indicates the absence of harmful multicollinearity, confirming that the estimated regression coefficients are reliable and stable.

Table 4: Variance Inflation Factor (VIF)

| Variables | VIF | 1/VIF |
|---|---:|---:|
| PL | 7.57 | 0.132023 |
| LawEx | 6.98 | 0.143336 |
| ROA | 5.92 | 0.16898 |
| ROE | 5.47 | 0.182718 |
| DS | 3.95 | 0.253472 |
| GS | 3.05 | 0.328105 |
| BS | 3.05 | 0.328186 |
| AE | 2.54 | 0.394283 |
| IS | 2.44 | 0.410557 |
| ACTM | 2.41 | 0.41448 |
| ACAE | 2.26 | 0.442568 |

| | | |
|---|---|---|
| PBM | 2.23 | 0.448585 |
| AGE | 2.13 | 0.468881 |
| FS | 1.98 | 0.504745 |
| SIZE | 1.82 | 0.548933 |
| FoBM | 1.73 | 0.576502 |
| IBM | 1.67 | 0.600518 |
| BIG4 | 1.45 | 0.691937 |
| FBM | 1.39 | 0.719645 |
| LEV | 1.2 | 0.835396 |
| GRI | 1.18 | 0.84637 |
| Mean VIF | **2.97** | |

Source: Author's Calculation

The results of the regressions from the three estimation methods are presented in table 5. The main empirical specification is the Random Effects model, estimated with cluster-robust standard errors, as shown in Model 1. To check the robustness of the results, the Fixed Effects model with cluster-robust standard errors and the Feasible Generalized Least Squares (FGLS) estimation are reported in models 2 and 3, respectively. The overall pattern of the signs and significance of the various key variables is fairly similar across the alternative estimators, indicating that the primary results are not sensitive to the estimation method. In the primary model, none of the board variables: board size (BS), independent board members (IBM), female board members (FBM), political board members (PBM), audit committee members (ACTM), or accounting experts (AE) are statistically significant. The results suggest that just adding the number of directors or adding some type of characteristics of a director is not enough to affect the tax avoidance practice in listed banks of Bangladesh. This finding contradicts the agency theory monitoring arguments of Jensen and Meckling (2019) and Fama and Jensen (1983) that suggests that better governance mechanisms will lead to better managerial monitoring and decrease in opportunistic managerial behavior. However, in a few governance studies, similar weak connections have been found, with the results showing that the effectiveness of the board characteristics is more dependent on institutional settings than on the composition of the board (Minnick & Noga, 2010; Armstrong et al., 2015).

By contrast, the existence of legal professionals on the board (LawEX) is positively related to BTD and is still significant in the Random Effects model. Overall, this result indicates that directors who are knowledgeable about the law may help firms to implement more complex tax strategies and thus manage complex tax requirements. Existing research suggests that legal and governance knowledge can help expand firms' ability to utilise legal tax saving opportunities while staying 'within the lines' (Richardson, Taylor, & Lanis, 2013; Desai &

Dharmapala, 2006). In the same way, the coefficient of audit committee accounting expertise (ACAE) is positive and statistically significant in both models (Random Effects and FGLS). This finding suggests that audit committees that are well-versed in financial matters can help to enhance tax planning efforts rather than simply deter aggressive tax strategies (Robinson et al., 2012; Kusnadi et al., 2016). As for the ownership structure, it is found that the effect of foreign ownership on the board (FOBM) is negative and only begins to become significant in the FGLS specification, whereas the foreign ownership on the panel estimators remain insignificant. While findings across models are not entirely consistent, the findings of the FGLS suggest that improved governance practices and the increase of transparency expectations could be an additional impediment to aggressive tax planning if representation is increased. This interpretation is consistent with the results of Salihu et al. (2015) that foreign investors generally prefer lower tax-related risk due to reputational concerns and institutional monitoring of the tax risk. Government shareholding (GS) is positively associated with BTD for the Random Effects and FGLS models whereas it takes a negative sign in the Fixed Effects model. While the direction of the relationship varies across estimators, the relevance of GS indicates that ownership structure affects corporate tax decisions and could be capturing differences between cross-sectional and within-bank variation. The size of the bank (SIZE) is always a positive coefficient with significant level across all three models, suggesting that there is a positive and significant relationship between the size of the bank and the tax planning activities. This is in accord with the political cost and resource availability explanations offered by Zimmerman (1983) where he argues that sizable firms have greater resources and knowledge to engage in advanced tax planning.

The relationship between foreign ownership (FS) and the BTD is negative and found to be statistically significant in the two models, suggesting that the banks in foreign ownership are more conservative in tax strategy. The managers could be less inclined than usual to engage in aggressive tax planning due to increased regulatory scrutiny and increased reputational risks when the economy is tight. Likewise, firm age (AGE) has a consistently negative and significant coefficient, suggesting that older banks are generally less involved in tax avoidance activities. Although the older establishments are generally better monitored by various stakeholders, they also tend to be more concerned with maintaining their reputation over the long term (Lanis & Richardson, 2011). The profitability measures produce the best and most stable results for all specifications. The ROE is negatively associated with BTD for all the models while ROA is positively associated and highly significant for all the models. The results show that by more efficiently utilizing their assets, firms will have greater opportunities to plan their taxes, as well as generate higher returns for their shareholders, and that the lower the book-tax difference, the higher the return to shareholders. Proficiency and corporate tax avoidance have also been shown to be related in the studies by Desai and

Dharmapala (2006), Hanlon and Heitzman (2010), and Armstrong et al. (2015). Further, there is a positive relation between leverage (LEV) and the tax position of the firms in both the Random Effects and Fixed Effects models, indicating debt financing affects tax positions via the tax deductibility of interest expenses (Demirgüç-Kunt & Huizinga, 2001). Overall, the results of the robustness analyses give further confidence to the empirical results. The main relationships with legal expertise, audit committee accounting expertise, firm size, foreign ownership, profitability and firm age are relatively similar across estimation methods, though there are some coefficients that differ. Thus, it seems that the Random Effects model with cluster-robust standard errors is a good starting-point, and that the results of the Fixed Effects and FGLS estimations back this up as the main results do not seem to rely on a specific econometric approach.

Table 5: Random Effects, Fixed Effects and FGLS Regression Results

| **Variables** | **Model 1 Random Effects (Cluster Robust)** | **Model 2 Fixed Effects (Cluster Robust)** | **Model 3 FGLS** |
|---|---|---|---|
| BS | 34.140<br>(43.823) | 45.670<br>(87.205) | -54.968<br>(67.595) |
| IBM | -54.140<br>(241.219) | 484.801<br>(282.868) | -124.166<br>(203.976) |
| FBM | -173.420<br>(233.303) | -318.639<br>(251.527) | -16.442<br>(144.565) |
| FoBM | -1071.443<br>(748.077) | -239.529<br>(749.968) | -1406.121**<br>(566.323) |
| LawEX | 1111.318**<br>(554.605) | 873.768<br>(613.452) | 986.809<br>(844.536) |
| AE | -280.916<br>(331.078) | 83.728<br>(337.722) | -301.090<br>(259.891) |
| PBM | -114.056<br>(159.357) | 30.150<br>(219.630) | -122.059<br>(142.725) |
| ACTM | -154.047<br>(245.676) | -329.932<br>(283.543) | -270.774<br>(249.147) |
| ACAE | 692.446**<br>(352.073) | 551.584<br>(355.303) | 862.120***<br>(289.585) |
| PL | -1510.937*<br>(798.642) | -1006.605<br>(1025.116) | -1800.363*<br>(937.324) |
| DS | -28.706 | 50.161 | -46.249** |

| | | | |
|---|---|---|---|
| | (32.751) | (76.596) | (21.030) |
| GS | 63.015*<br>(37.955) | -1456.801***<br>(512.394) | 32.970*<br>(16.849) |
| IS | -38.785<br>(73.045) | 44.683<br>(71.997) | -42.918*<br>(21.998) |
| FS | -116.392**<br>(56.939) | 273.195<br>(161.593) | -101.231***<br>(32.158) |
| GRI | 809.892<br>(912.257) | -148.366<br>(1058.961) | 2390.496<br>(1728.405) |
| BIG4 | 351.144<br>(456.475) | 1095.605*<br>(620.317) | -532.641<br>(417.845) |
| AGE | -145.182**<br>(58.863) | -161.705<br>(182.061) | -149.869***<br>(34.363) |
| SIZE | 4643.274*<br>(2375.455) | 7829.656***<br>(2575.786) | 2945.743***<br>(768.441) |
| LEV | 287.406***<br>(76.945) | 313.590**<br>(129.326) | 221.057<br>(283.747) |
| ROE | -104.152*<br>(57.792) | -98.968*<br>(51.773) | -106.734***<br>(23.463) |
| ROA | 5115.349***<br>(950.044) | 5108.920***<br>(910.828) | 4866.503***<br>(495.204) |
| Year FE | Yes | Yes | Yes |
| Constant | -23766.510 | -41712.330 | -12507.990** |
| Observations | 174 | 174 | 174 |
| Banks | 29 | 29 | 29 |
| Wald/F Statistic | Wald $\chi^2 = 277.99$ | — | Wald $\chi^2 = 332.05$ |
| Robust SE | Yes | Yes | No |

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Source: Author's Calculation

Table 6 summarizes the outcomes of the proposed hypotheses. Among the eight hypotheses, only $H_6$ is supported, indicating that accounting expertise in the audit committee is positively associated with corporate tax avoidance. The remaining hypotheses are not supported due to statistically insignificant relationships that differ from the proposed expectations. These findings suggest that, in the banking sector of Bangladesh, board characteristics such as board size, board independence, female representation in the board, foreign board ownership, institutional ownership, and Big4 audit engagement do not significantly explain variations in corporate tax avoidance. Instead, accounting expertise in the audit committee appears to be the only governance attribute with a significant influence on tax avoidance. Although no formal hypotheses were developed for the additional governance and control variables, several of them show statistically significant effects. Board legal expertise and government ownership are positively associated with corporate tax avoidance, whereas foreign shareholding and the interaction between political board members and legal expertise show negative effects.

Table 6: Summary of Hypothesis Testing

| **Hypothesis** | **Statement** | **Expected Sign** | **Regression Coefficient** | **Decision** |
|---|---|---|---|---|
| $H_1$ | Board size is negatively associated with corporate tax avoidance. | − | 34.140 (Insignificant) | Rejected |
| $H_2$ | Board independence is negatively associated with corporate tax avoidance. | − | −54.140 (Insignificant) | Rejected |
| $H_3$ | Female board representation is negatively associated with corporate tax avoidance. | − | −173.420 (Insignificant) | Rejected |
| $H_4$ | Foreign board membership is positively associated with corporate tax avoidance. | + | −1071.443 (Insignificant) | Rejected |
| $H_5$ | Board accounting expertise is negatively associated with corporate tax avoidance. | − | −280.916 (Insignificant) | Rejected |
| $H_6$ | Audit committee accounting expertise is positively associated with corporate tax avoidance. | + | 692.446** | Accepted |
| $H_7$ | Institutional ownership has a negative relation with corporate tax avoidance. | − | −38.785 (Insignificant) | Rejected |
| $H_8$ | Engagement with Big4 audit firms is negatively associated with corporate tax avoidance. | − | 351.144 (Insignificant) | Rejected |

## 5. CONCLUSION

The study analyzed the impact of corporate governance mechanisms on corporate tax avoidance in Bangladeshi listed commercial banks by applying panel data for 29 banks during 2019-2024. The analysis shows that only a few attributes of governance have a significant impact on tax avoidance, using Random Effects with cluster-robust standard errors as the main estimation method and Fixed Effects and FGLS as robustness checks. In particular, there are positive links between legal expertise on the board and audit committee accounting expertise and book-tax differences, indicating that governance expertise could enable more sophisticated tax planning, rather than just a more effective monitoring system. In addition, four of the control variables- firm size, leverage, profitability, and firm age are important factors in explaining corporate tax behavior. Several of the conventional governance features, on the other hand, do not appear to have a consistent influence on the estimated models, such as the size of the board, its independence, the presence of women on the board, the presence of the political party on the board, and the size of the audit committee.

The findings suggest that governance mechanisms work best when the board and audit committee members have the necessary knowledge and expertise, as well as a suitable composition. Thus, in addition to structural governance rules, regulators and policymakers should focus more on the quality of the expertise on the board, and how governance is applied in practice. Further research should be done on larger samples of non-financial firms or between countries to investigate how the governance–tax avoidance linkage is affected by institutional differences. Future research could expand on these findings by using ownership concentration, CEO characteristics, board meeting frequency, environmental, social and governance (ESG) performance, or institutional quality as a moderating or mediating variable to better explore the impact of corporate governance on tax planning decisions and the mechanisms that underlie this relationship.

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