Corporate Governance and IFSB Standard-4: Evidence from Islamic Banks in Bangladesh

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Abstract

Purpose – This paper aims to examine the compliance status of Islamic banks in Bangladesh with Shari'ah-based accounting standards named Islamic Financial Services Board (IFSB) standard-4 and its association with corporate governance.

Design/methodology/approach – The six years of secondary data, including the annual reports of 2013-2018, were collected from the websites of all the seven listed Islamic banks, i.e., 100% of the population available during the period of study. The study employed a content analysis approach for systematically categorizing and analyzing the contents disclosed in the annual report. A total compliance score (TCS) based on 133 reporting items of IFSB standard-4 were considered for content analysis. Furthermore, the study applied the ordinary least square (OLS) to investigate the impact of corporate governance on IFSB standard-4.

Findings– The study found that the level of compliance with the IFSB standard by the Islamic banks in Bangladesh is poor, as the overall compliance status is 44.83 percent. Further, the study observed a significant and positive influence of the Shari'ah supervisory committee, the board size, accounting experts on the board, foreign ownership, and institutional ownership on the level of compliance with IFSB standard-4. On the other hand, the study found a negative effect of directors' ownership on the level of compliance with IFSB standard-4.

Practical implications- The study provides the management of Islamic banks an insight into developing their governance characteristics to comply with Islamic accounting and reporting standards. Moreover, the study expects to facilitate the management of Islamic banks in designing their accounting and reporting outlines to enhance the level of compliance with the IFSB standards.

Originality/value: This pioneering study on IFSB standards opens an avenue to the researchers exploring the accounting and reporting status of Islamic banks considering the requirements of the IFSB standard.

Key Words – IFSB Standards, Compliance status, Islamic banks, Corporate governance, Bangladesh

1. Introduction

Accounting is one of the widely used mechanisms of revealing the actual occurrence of an entity to its stakeholders. The mechanisms of accounting vary from country to country and organization to organization due to educational, sociological, economic, political, legal, and technological factors despite widespread use to reveal the real performance of an entity to its stakeholders (Dima *et al.*, 2014). Moreover, profit motive and service orientation have significant dominance in the accounting and reporting mechanism of the business organization (Ullah *et al.*, 2018). Islamic banks operating in Bangladesh compulsorily apply some rules and regulations for accounting and reporting purposes, such as the Companies Act, the Banking Companies Act, the Securities and Exchange Commission rules and ordinance, and Bangladesh Bank circulars, IAS and IFRS. However, the Islamic Financial Services Board (IFSB) and the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) standards are not yet compulsory. Though the Islamic banks have been making a repeated appeal for the last four decades, no independent body has been established in regulating Islamic banks in Bangladesh. Islamic banks are governed by the same secular law, environment, and regulatory control as traditional interest-based banks (Ullah, 2013).

As more than 90% of Bangladesh's people are Muslims, mass people are highly interested in Islamic banking. Currently, ten full-fledged Islamic banks are operating in Bangladesh, of which investment and deposit growth have become 13.61% and 15.05% respectively from 2018 to 2019 (Rashid et al., 2020a). As a significant part of the stakeholders of the Islamic banks are Muslims, they need some information about whether the banks are disclosing information as per IFSB standards. IFSB-4 focuses on the Disclosures to Promote Transparency and Market Discipline for Institutions Offering Islamic Financial Services. The standard motivates the IFIs to disclose necessary information, report fair-value of Zakatable assets such as inventories and refrain from revealing information regarding Haram (illegal transactions) investments, report Shari'ah compliance status of their operations; and finally, manage the Shari'ah compliance risk (AOSSG, 2010). Therefore, Islamic banks require disclosing the information to facilitate the decision-making process of the Muslims.

Although several studies including Grassa *et al.* (2018), Katmon *et al.* (2019), Elgattani & Hussainey (2020) conducted their research on the relationship between corporate governance and accounting reporting and disclosure, there is a dearth of research on the relationship between international Islamic standards and corporate governance in Islamic banks. The scarcity of research on the association between corporate governance and IFSB standards-4 motivates this study. Based on the literature, the study identifies the following two research questions:

RQ-1: What is the level of compliance with IFSB standard-4 by the Islamic banks in Bangladesh?

RQ-2: Whether corporate governance impact the level of compliance with IFSB standard-4?

To find out the answer to the above questions, this study aims to measure the level of compliance with IFSB-4 and then investigate its association with the corporate governance of the Islamic banks in Bangladesh. More specifically, the study contributes to the existing literature in the following ways. ***Firstly***, the study extends the literature on accounting and reporting of Islamic banks by exploring the compliance with IFSB standard-4 and showing the features of corporate governance that affect the level of compliance with that standard. ***Secondly***, the study explores and extends a new avenue for the accounting and reporting researchers for further research. ***Finally***, the study provides policymakers, management, and Shari'ah supervisory committee an insight into furnishing their governance characteristics to comply with Islamic accounting and reporting standards.

The remainder of the paper has been organized as: Section 2 discusses the theoretical foundation and bases of hypotheses development, Section 3 outlines the methodology of the study, Section 4 elaborates the findings of the study, Section 5 provides further discussions of the paper, and finally, Section 6 concludes the paper with limitations of the study and suggesting future research.

2. Theory and hypotheses development

2.1 Theoretical orientations

The stakeholder theory and agency theory are the two prominent theories used frequently in accounting standards and corporate governance disclosure studies (Basiruddin & Ahmed, 2019). The stakeholder theory argues that the disclosure needs to satisfy the information required by different stakeholders and explains how the management responds to them through accounting reports (Freeman, 2010). Moreover, it explicates a relationship between the management and the users of accounting information, including shareholders, creditors, suppliers, governments, and different regulatory bodies. On the other hand, in order to reduce the information asymmetry gap, the agency theory allows the management, as a dominant agent of the firms, to disclose more information voluntarily (Gul & Leung, 2004). Basiruddin & Ahmed (2019) argued that agency problem arises in Islamic banks in the long run when the goal of the board of directors (BOD), managers and Shari'ah supervisory committee (SSC) are divergent. The shareholders aim to maximize profit by enhancing performance and expanding the business by attracting customers. Simultaneously, the SSC and management of the banks would like to ensure Shari'ah compliance to meet the expectation of the majority of the customers who deal with Islamic banks only for religious restrictions. This dilemma among the management and shareholders can lead to the agency problem.

Moreover, as per the stakeholder-agency perspective, the conflicts between the management and stakeholders as to the voluntary disclosure can be reduced if manager decisions are allied with stakeholders' interests (Grassa *et al.,* 2018). To mitigate these conflicts, the board composition and its sub-group always try to establish a good reputation as to their independence from management, their guiding management and their work ethic (Armstrong *et al.*, 2015). The board characteristics including board size, its independence, financial experts on the board and audit committee, therefore, have been widely used in the disclosure research both theoretically and empirically (Armstrong et al., 2015). Moreover, the ownership structure comprised of directors, institutional and foreign shares of Islamic banks tends to influence the managers to disclose more information on IFSB standards.

2.2 Hypotheses development

2.2.1 Shari'ah supervisory committee (SSC)

The Shari'ah board (also Shari'ah supervisory board or Advisory board) is known as SSC in Bangladesh. SSC is formed with different dignitaries like Mawlana (religious leader), Mufti (Islamic scholar), professor, Ph.D. holder; barrister, economists, financial experts and bankers (Ahmed & Khatun, 2013). The primary purpose of forming the board is to provide the stakeholders with a guarantee of conformity with Shari'ah rules and principles. Therefore, the SSC plays a crucial role in advising the board of directors on the Shari'ah matters, which enable the Islamic financial institutions (IFIs) to comply with the Shari'ah rules. The SSC also oversees whether the IFIs comply with the policies, procedures and standards issued by international Islamic institutions like AAOIFS and IFSB (Mollah & Zaman, 2015). The large SSC might influence the management in monitoring the IFIs towards "full disclosure" with compliance with the Shari'ah principles and standards. The prior studies argued that large SSC influences positively the quality of disclosure of IFIs (Basiruddin & Ahmed, 2019; Grassa et al., 2018).

On the other hand, the focus on the assumption that the quality of communication, coordination of activities and decision making between larger groups are more complicated and expensive than in smaller groups. Moreover, the costs outweigh the benefits of getting more people in SSC to rely on (Grassa, 2016). Nevertheless, El-Halaby & Hussainey (2016) found a significant and positive impact of SSB size on the aggregate disclosure of Shari'ah, social and financial reporting. Besides, the combination of their expertise improves the BOD and other committees' oversight activities, which, in turn, enables the banks to ensure compliance with IFSB standards-4. Therefore, the study posits the hypothesis.

H1: There is a significant and positive relationship between the larger SSC and the level of compliance with IFSB-4.

2.2.2. Board size

Among the board compositions, the banks' larger board size could help increase the corporate disclosure level as a larger board of directors gathers diversified knowledge and skills (Grassa *et al.,* 2018). As a result of the larger board size, the Islamic banks tend to be disclosed more information in the annual reports and thereby comply with IFSB standard-4. Similarly, the prior studies documented that firms with a larger number of board members have more tendency to disclose information voluntarily in the annual reports (Grassa *et al.,* 2018; Muttakin *et al.*, 2015). Based on the proverb, "too many cooks spoil the broth", Rashid *et al.* (2020b) have mentioned that the accurate decision-making process may be hindered because of having too many board members. Moreover, the Shari'ah compliance can hinder the way of achieving profit as the rules limit Islamic banks' markets and products; managers' remuneration can be affected due to low profitability (Basiruddin & Ahmed, 2019). However, conducting a study in GCC banks, Grassa (2016) found that there is a positive association between board size and the banks' corporate disclosure. The analysis, therefore, posits the hypothesis as follows:

H2: There is a significant and positive relationship between the board size and the level of compliance with IFSB-4.

2.2.3 Board independence

According to the stakeholder-agency principle, the independence of the board leads to better management and, thereby, to high disclosure standards. As per the agency theory, it is necessary to observe the activities of the board experts by the independent external member because of the nature of opportunistic behavior (Jahid et al. 2020; Pranata & Laela, 2020). The previous studies' findings suggest that a positive association between board independence and voluntary disclosure (Katmon et al., 2019). Additionally, the theory suggests that a large number of independent directors enable the management to monitor its self-interest activities and, thus, may motivate the banks to disclose more information. Interestingly, some other studies found a negative impact of board independence on Shari'ah non-compliant risk (Basiruddin & Ahmed, 2019) since the inclusion of external directors requires additional costs for the company (Rashid *et al.,* 2020b). Hence, it is necessary to examine the relationship between board independence and IFSB standard, and the study assumes a positive relationship.

H3: There is a significant and positive relationship between board independence and the level of compliance with IFSB-4.

2.2.4 Accounting experts on the board

In the present study, accounting experts on the board have professional degrees like CA and CMA or Ph.D. in accounting or finance. The board of directors must need good accounting knowledge to comply with the international standards ensuring better quality supervision and consultancy.

The study of Basiruddin & Ahmed (2019) found that accounting experts in the Shari'ah committee reduce the risk of non-compliance. On the other hand, Rashid *et al.* (2020b) documented that accounting experts concentrate more on the profitability of a firm instead of sustainability and hence, reduce the level of compliance with international standards. However, accounting experts on the board are thought to play a better role in monitoring and advising the banks' management to report and disclose more information than the non-expert members (Armstrong et al., 2015). Therefore, the study projects the following hypothesis.

H4: There is a significant and positive relationship between the accounting expert on the board and the level of compliance with IFSB standard-4.

2.2.5 Audit quality

Audit plays a pivotal role in supervising, monitoring, and directing a firm's management to implement an accounting control system to prepare financial statements (Zalata *et al.*, 2018). To enhance information transparency, the firm requires qualified auditors to ensure its efficiency, resulting in better accounting standards (Grassa, 2016). Similarly, Elgattani & Hussainey (2020) found the size of the audit committee as a crucial factor of AAOIFI governance disclosure in Islamic Banks. The study, therefore, posits a positive relationship between audit quality and IFSB standard-4.

H5: There is a significant and positive relationship between audit quality and the level of compliance with IFSB-4.

2.2.6 Ownership structure

According to stakeholder theory, ownership structure influences the management to ensure stockholders' protection. Therefore, the study examines the impact of foreign directors and institutional ownership on compliance with IFSB standard-4 as they hold a significant portion of shares of the Islamic banks in Bangladesh.

2.2.6.1 Foreign ownership

Prior studies found that foreign owners are at an information gap about the institutions compared to domestic owners, which leads them to create pressure managers to disclose more quality information (Grassa, 2016). Moreover, emphasizing the quality of disclosed information viewed as the sign of transparency of firms, Mi Choi *et al.* (2012) highlighted that foreign shareholders play a crucial role in ensuring the quality of the information to strengthen their position to influence the board. The higher the percentage of foreign ownership contributes to increased demand and incentive for more quality information to be published, resulting in more incredible accounting information. Moreover, the foreigners purchase the shares with an expectation that Islamic banks must follow the *Shari'ah* principles in their operations, enhancing the level of compliance with Islamic accounting standards. Therefore, the study hypothesizes the following:

H6: Foreign ownership has a significant impact on the level of compliance with IFSB-4.

2.2.6.2 Directors' ownership

The board of directors is appointed to oversee the interest of the shareholders in the institutions. The ownership of directors also seeks to reap the advantages of their management effort for shareholders. When the directors find that the assets held by them in more risk and possibility of loss, they can abuse their discretion more easily (Chen *et al.*, 2008). On the contrary, when they find themselves as both owners and managers, it is easy for them to manage funds of the institutions and get more flexibility to take actions against shareholders' interests. These opportunities lead them not to disclose accurate information as required by the accounting standards. So, the study puts forward the following hypothesis:

H7: Directors' ownership has a significant and negative impact on the level of compliance with IFSB-4.

2.2.6.3 Institutional ownership

The study investigated the relationship between institutional ownership and the disclosure of IFSB as the institutional shareholders play a significant role in monitoring the management of banks and helping to disclose more details related to products and services that lead the business to better financial results (Grassa et al., 2018). In Saudi Arabia, Azid & Alnodel (2019) found that local financial institutions owned by non-governmental agencies are more likely to voluntarily reveal their Shari'ah governance, especially from the banking sector. Therefore, the following hypothesis is developed:

H8: Institutional ownership has a significant and positive impact on the level of compliance with IFSB-4.

3. Methodology

3.1 Data

The study has used secondary data covering six years from 2013 to 2018 from the annual reports of all the seven (100%) listed Islamic banks available during the period of study in Bangladesh. The study has used several years of data to check the compliance level in line with the prior studies of Ullah et al. (2018) in Bangladesh from 2008 to 2012; Basiruddin & Ahmed (2019) in Malaysia and Indonesia over the period 2007-2017 and Grassa et al. (2018) in 11 countries from 2004 to 2012. The listed Islamic banks in Bangladesh are Islami Bank Bangladesh Limited (IBBL), Social Islami Bank Limited (SIBL), Shahjalal Islami Bank Limited (SJIBL), Export-Import Bank of Bangladesh Limited (EXIM), First Security Islami Bank Limited (FSIBL), Al-Arafah Islami Bank Limited (AIBL), and ICB Islami Bank Limited (ICBL). The study could not consider Union Bank Limited which started operation in the middle of 2013 and other three newly established/ converted Islamic banks such as NRB Global Bank Limited, Standard Bank Limited and Jamuna Bank Limited.

Table 1: Showing classes of items taken as the basis of Un-weighted Compliance Index (UCI)

Sl No.	Req. Items Category	Req. Items	Sl No.	Req. Items Category	Req. Items
1	Corporate Information	6	10	Liquidity Risk	4
2	Capital Structure	6	11	Market Risk	4
3	Capital Adequacy	8	12	Operational Risk	5
4	Investment Accounts (both Unrestricted and Restricted Investment Account Holders (IAH)	11	13	Rate of Return Risk	4
5	Unrestricted Investment Accounts	18	14	Displaced Commercial Risk	7
6	Restricted Investment Accounts	19	15	Contract-specific Risks	2
7	General Disclosures	11	16	General Governance Disclosures	6
8	Credit Risk	10	17	Shari'ah Governance Disclosures	6
9	Credit Risk Mitigation	6		**Total**	**133**

3.1.1 The Dependent Variable

The dependent variable used in this study is the Un-weighted Compliance Index (UCI). The UCI has been established based on a dichotomous process where an object scores' 1' if it complies and

'0' if it does not comply across 133 items of IFSB standard-4 shown in Table 1 by following Ullah et al. (2018). The overall compliance score (TCS) would be determined as follows:

$$\text{TCS} = \sum_{i=1}^{n} ci$$

Where, c = 1 if item *ci* is disclosed and 0, otherwise
n = number of items

Table 2: Summary of variables and their measurement

Abbreviated name	Full name	Variable description
	Dependent variable	
TCS	Total compliance score	Total compliance score with IFSB score of 6 years from 2013 to 2018 has been measured with UCI
	Independent variables	
SSC	*Shari'ah* supervisory committee	The number of members on the board of *Shari'ah* supervisory committee
BS	Board size	The number of total members on the board of directors
IBM	Independent board of director	The number of independent members on the board of directors
AE	Accounting expert	The number of board members who have a professional degree like CA, CMA or Ph.D. in the accounting field
BIG4	Audit quality	This is calculated as a dummy variable set to 1 if one of the BIG4 companies audits the bank and 0, otherwise.
AC	Audit committee	The number of audit committee members
FS	Foreign share	Percent of shares owned by foreign owners
DS	Director share	Percent of shares owned by the board of directors
IS	Institutional share	Percent of shares owned by institutions
	Control variables	
ROA	Return on assets	The ratio of net profit after tax (NPAT) to total assets over 2013 to 2018
ROE	Return on assets	The ratio of NPAT to total equity over 2013 to 2018
DG	Deposit growth	Percent of change in present year's deposit compared to the preceding year
SIZE	Bank size	The logarithm of total assets
LEV	Leverage	The ratio of total debts / total assets
DEBT	Liability	The logarithm of the total amount of short and long-term liabilities

3.1.2 Independent variables

The details of the independent variables are in Table 2.

3.1.3 Control variables

The study has used return on assets (ROA) and deposit growth as the indicator of financial performance measurement. According to signaling theory, firm financial performance has a significant impact on the level of voluntary disclosure (Grassa et al., 2018; Muttakin et al., 2015). The study also used the size of the bank and leverage as control variables considering the previous research related to disclosure (Katmon et al., 2019).

3.2 Model Specification

In the model, the study includes the Shari'ah supervisory committee, the board size, independent board members, accounting experts on the board, audit committee, and ownership structures as the characteristics of corporate governance to examine their impact on the level of compliance with IFSB-4.

$$TCS_{it} = \alpha_0 + \beta_1 SSC_{it} + \beta_2 BS_{it} + \beta_3 IBM_{it} + \beta_4 AE_{it} + \beta_5 BIG4_{it} + \beta_6 FS_{it} + \beta_7 DS_{it} + \beta_8 IS_{it} + \beta_9 ROA_{it} + \beta_{10} DG_{it} + \beta_{11} SIZE_{it} + \beta_{12} LEV_{it} + \beta_{13} YEAR\ DUMMY_{it} + \varepsilon_{it}$$

Where TCS = Un-weighted total compliance score per sample bank received.

α_0 = the constant

ε_{it} = the error term

β_1 to β_{13} = the coefficients of the variables defined in Table 2, and

'i' and 't' = the number of banks and period respectively.

3.3 Measurement instruments

Descriptive statistics have been used as an essential tool to evaluate the overall summary of a set of data. Moreover, we have run the Pearson correlation to show the relationship and check multicollinearity among the variables. Multicollinearity is a process in which one predictor variable can be linearly estimated from the other with a significant degree of precision in a multiple regression model. High multicollinearity can bias a model. We have also used the variance inflation factor (VIF) to confirm whether the multicollinearity problem exists in our data. Then, we run the OLS regression to investigate the impact of corporate governance on the level of compliance with IFSB-4. We have also run some additional models to test the robustness of our baseline model. We have dropped some variables such as audit committee, ROA, and LEV and used alternative variables of BIG4, ROE, and DEBT respectively to check the baseline model's robustness. Finally, a two-stage SLS was run to check the endogeneity issue of the study. We have used STATA to have run these instruments.

4. Findings and analysis

4.1 Compliance with Islamic Financial Services Board (IFSB) standard -4

Table 3 shows the percentage of yearly and average compliance scores. The average score reveals that the Islamic banks in Bangladesh differ in complying with IFSB standard- 4. The IBBL scored 54.76 percent (the highest) average compliance score, whereas the FSIBL scored 37.59 percent (the lowest). The overall compliance score of IFSB standard- 4 over the six years is below half of the total items (44.83 percent). However, the findings provided that the overall IFSB standard-4 disclosure and compliance score of Islamic banks are not sufficient, though each bank's compliance level is increasing over the years. The banks' management may emphasize more disclosing information in the annual report, resulting in improving the compliance score. Moreover, the regulatory authority may design and implement the strategic policy that instigates the banks to disclose and comply with international standards like IFSB.

Table 3: Total Compliance Score in %

Serial no.	Bank	2013	2014	2015	2016	2017	2018	Average
1	IBBL	51.88	54.14	54.89	54.89	55.64	57.14	54.76
2	SIBL	45.11	45.86	46.62	48.12	48.12	48.12	46.99
3	AIBL	39.85	42.86	42.86	45.86	46.62	46.62	44.11
4	FSIBL	32.33	37.59	37.59	39.1	39.1	39.85	37.59
5	EXIM	41.35	41.35	41.35	42.86	42.86	44.36	42.36
6	ICBL	40.6	45.86	46.62	48.12	48.12	46.62	45.99
7	SJIBL	37.59	39.1	41.35	42.11	45.11	46.62	41.98
Average		41.25	43.82	44.47	45.86	46.51	47.05	44.83

4.2 Descriptive statistics

Table 4 presents descriptive statistics in which the number of observations used in the study is 42 for 7 Islamic banks over a period of six years. The average score of total compliance level (TCS) with IFSB-4 is 60. The average size of the board member of the Islamic banks is 15, of which the independent member is only 3. It means the independence of the board is questionable. The high standard deviation of the board size (4.04) and independent board member (1.52) indicate a high variation among the sample banks. Unfortunately, the number of financial experts is insignificant (0.86) in Islamic banks. As the banks have a separate audit committee, they may not be interested in keeping more accounting experts; it is costly. Moreover, concerning the audit committee's size, the average number of audit committee members is 5 (mean: 4.57). Concerning the ownership structure, the director holds the highest percentage of shares (33.7%) while foreign and institutional owners' possession is only 14.04 and 14.95 percent respectively. This result implies that the directors' owners have a chance to influence the business's decision-making process because of playing a dual role as both the owner and manager at the same time. Interestingly, the standard deviation of ROA (1.51%) and LEV (26.5%) is greater than that of their mean value of 0.39% and 20.22% respectively. These figures indicate a more significant variation in the financial performance among the Islamic banks.

Table 4: Descriptive Statistics (2013-2018)

Variables	Obs.	Mean	Std. Dev.	Min	Max
TCS	42	60.05	6.71	50	76
ROA	42	0.39	1.51	-4.76	2.36
ROE	42	10.06	3.83	0.63	16.16
DG	42	12.28	9.17	-7.56	30.81
LEV	42	20.22	26.05	4.24	95.03
DEBT	42	11.79	1.23	9.07	13.60
FS	42	14.04	23.02	0	52.98
IS	42	14.95	9.77	0	46.7
DS	42	33.70	14.60	0	51.28
AE	42	0.86	1.39	0	8
AC	42	4.57	0.94	3	6
BS	42	15.17	4.04	7	20
IBM	42	2.98	1.52	1	8
BIG4	42	0.14	0.35	0	1
SSC	42	8.31	3.17	4	13
SIZE	42	12.09	1.20	9.34	13.81

4.3 Correlation Analysis

Table 5 presents the Pearson correlations among the variables. The compliance level of IFSB standard-4 (TCS) is positively correlated with size of the *Shari`ah* supervisory committee (SSC) (0.365, p<0.01); firm size (SIZE) (0.261, p<0.1); board size (BS) (0.263, p<0.1); independent board member (0.42, p<0.01); accounting experts (AE) (0.631, p<0.01); audit quality (BIG4) (0.489, p<0.01); and foreign ownership (FS) (0.703, p<0.01). However, the TCS is negatively correlated with directors' shares (DS) (-0.51, p<0.01). The findings of correlation provide that the larger the firm's size, board, Shari'ah supervisory committee, the higher the board independence, greater the audit quality, more the financial experts in the board and more the percentage of foreign owners in the Islamic banks comply with the IFSB standard-4. On the contrary, director ownership reduces the level of TCS.

Table 5: Pairwise correlation

	TCS	ROA	DG	SIZE	LEV	BIG4	FS	IS	DS	AE	BS	IBM	SSC
TCS	1												
ROA	0.008	1											
DG	-0.041	0.563***	1										
SIZE	0.261*	0.750***	0.510***	1									
LEV	0.05	-0.869***	-0.510***	-0.819***	1								
BIG4	0.489***	0.108	0.040	0.370*	-0.115	1							
FS	0.703***	-0.471***	-0.407***	-0.223	0.439***	0.197	1						
IS	0.018	0.135	0.189	0.046	-0.052	-0.036	-0.197	1					
DS	-0.507***	0.695***	0.580***	0.552***	-0.695***	-0.020	-0.787***	0.172	1				
AE	0.631***	-0.119	-0.211	0.249	0.054	0.538***	0.461***	-0.008	-0.308**	1			
BS	0.263*	0.676***	.335**	0.711***	-0.611***	0.494***	-0.248	-0.13	0.501***	0.204	1		
IBM	0.42***	0.425***	0.25	0.743***	-0.533***	0.459***	0.146	-0.151	0.176	0.298*	0.548***	1	
SSC	0.365**	0.509***	0.174	0.535***	-0.51***	0.112	-0.018	-0.082	0.218	0.094	0.61***	0.538***	1

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.4 Multicollinearity problem

Before further analysis, the study investigates the multicollinearity problem among the variables. Table 5 provides that the highest correlation coefficient between leverage and ROA is 0.869, which is less than the threshold of 0.90 (Black *et al.*, 2010), meaning that there is no collinearity issue in the study. Furthermore, the variance inflation factor (VIF) presented in Table 6 shows that all the values are below the threshold of 10 (Hair *et al.*, 1984), meaning that the study is free from multicollinearity issues.

Table 6. Regression (OLS) results

		(1)	(2)	(3)	(4)	(5)
	VIF	TCS	TCS	TCS	TCS	TCS
SSC	2.39	0.382^{**} (0.182)	0.380^{**} (0.181)	0.458^{**} (0.185)	0.352^{**} (0.169)	0.522^{***} (0.166)
BOARD	4.61	0.417^{**} (0.201)	0.709^{***} (0.207)	0.766^{***} (0.208)	0.463^{**} (0.184)	
IBM	3.71	-0.432 (0.471)	0.195 (0.493)	-0.002 (0.496)	-0.308 (0.445)	-0.388 (0.482)
AE	2.32	0.719^{*} (0.406)	0.970^{**} (0.435)	0.900^{**} (0.387)	0.822^{**} (0.384)	0.800^{*} (0.452)
BIG4	2.46	2.244 (1.672)			1.427 (1.603)	3.798^{**} (1.542)
AC			-1.129 (0.849)	-1.077 (0.894)		
FS	3.63	0.121^{***} (0.031)	0.120^{***} (0.032)	0.129^{***} (0.034)	0.131^{***} (0.029)	0.125^{***} (0.031)
IS	1.32	0.121^{***} (0.044)	0.108^{**} (0.045)	0.140^{***} (0.042)	0.110^{**} (0.041)	0.077^{*} (0.043)
DS	5.29	-0.291^{***} (0.058)	-0.307^{***} (0.057)	-0.295^{***} (0.059)	-0.291^{***} (0.053)	-0.261^{***} (0.058)
ROA	6.50	0.748 (0.624)	1.188^{*} (0.629)		0.857^{*} (0.482)	1.511^{**} (0.637)
DG	1.89	0.163^{***} (0.056)	0.194^{***} (0.055)	0.189^{***} (0.060)	0.193^{***} (0.053)	0.187^{***} (0.059)
SIZE	8.11	1.315 (0.898)	-0.526 (1.238)	-0.258 (1.293)		1.234 (0.927)
LEV	7.07	0.020 (0.040)	0.011 (0.038)	-0.022 (0.033)		0.040 (0.040)
ROE				0.116 (0.192)		
DEBT					0.597 (0.767)	
YEAR DUMMY		Yes	Yes	Yes	Yes	Yes
_cons		36.075^{***} (10.305)	62.359^{***} (15.324)	58.293^{***} (15.622)	48.676^{***} (8.776)	43.716^{***} (10.409)
N		42	42	42	42	42
F		23.326	21.290	23.049	27.289	20.731
r2		0.915	0.932	0.923	0.927	0.915
r2_a		0.876	0.888	0.883	0.893	0.871

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.5 Regression results

The empirical results in Table 6 present the impact of corporate governance on compliance with IFSB standard-4. Under the baseline model, the study examines the predicted effect of the *Shari'ah* supervisory committee, board characteristics, and ownership structure on the compliance of IFSB standard-4. Column 1 shows a significant and positive relationship of SSC (0.38, $p<0.05$), board size (0.74, $p<0.01$) and accounting experts in the board (0.96, $p<0.05$) with IFSB standard-4. In contrast, independent board members and audits show an insignificant effect. Concerning the effect of ownership structure, the study found the positive and significant impact of foreign ownership (0.12, $p<0.01$) and institutional ownership (0.12, $p<0.01$) on IFSB standard-4, whereas directors' ownership (-0.29, $p<0.01$) affects negatively.

Furthermore, the study investigated the effect of financial performance, leverage and size of the banks as control variables on IFSB standard-4 and found an insignificant effect of ROA while the deposit growth, another financial performance indicator, has a significant and positive impact on the TCS of IFSB standard-4. However, the study did not record any significant effect of firm size and leverage on the TCS of the IFSB standard. These results are also consistent with the findings of Azid & Alnodel (2019).

4.6 Additional analyses for robustness

Further, the study analyzed additional tests using alternative variables to check the robustness of the baseline model. *First*, the size of the audit committee in column 2 of Table 6 is an alternative variable of BIG4. The findings are almost similar to the baseline model except for a significant and positive relationship between ROA and TCS of IFSB standard-4. *Second*, B. *Third*, DEBT has been used as an alternative variable of leverage; we did not find any significant difference in the results between the baseline model and column 4. *Finally*, in column 5, dropping the board size from the baseline model, the study found similar results except for the significant relationship between BIG4 and TSC of IFSB standard. The result provides an insight that the higher the audit quality, the higher the level of compliance of the IFSB standard, only if the board of directors reduces their control over the audit committee. Overall, the additional models confirm the baseline model's findings, proving that the study results are robust.

Table 7. First and Second stage two SLS regression models

	1		2	
	First stage	**Second stage**	**First stage**	**Second stage**
	SSC	TCS	BS	TCS
SSC (Fitted value)		0.676*** (0.153)	0.262*** (0.099)	0.114 (0.166)
SSC_{t-1}	0.787*** (0.109)			
BS (Fitted value)	0.204 (0.126)	0.482*** (0.157)		1.217*** (0.260)
BS_{t-1}			0.543*** (0.114)	
IBM	0.098 (0.327)	-1.353*** (0.369)	-0.139 (0.316)	-0.687* (0.402)
AE	0.062 (0.223)	0.409* (0.248)	0.065 (0.212)	0.465* (0.260)
BIG4	-1.117 (0.962)	2.275* (1.164)	3.160*** (0.912)	-2.457 (1.710)
FS	0.025 (0.032)	0.125*** (0.036)	-0.067* (0.035)	0.164*** (0.041)
IS	-0.021 (0.025)	0.095*** (0.027)	-0.044* (0.023)	0.123*** (0.030)
DS	0.049 (0.052)	-0.358*** (0.059)	-0.106* (0.058)	-0.323*** (0.064)
ROA	0.140 (0.501)	0.555 (0.558)	0.268 (0.488)	0.347 (0.629)
DG	-0.003 (0.034)	0.125*** (0.038)	0.048 (0.035)	0.128*** (0.040)
SIZE	-0.280 (0.577)	2.388*** (0.645)	0.847 (0.607)	1.053 (0.818)
LEV	0.013 (0.021)	0.013 (0.023)	0.020 (0.020)	-0.006 (0.027)
YEAR DUMMY	Yes	Yes	Yes	Yes
_cons	1.397 (6.130)	28.011*** (6.812)	-7.359 (7.162)	43.419*** (9.438)
N	35	35	35	35
r2	0.859	0.962	0.922	0.958
r2_a	0.771	0.939	0.867	0.929

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.7 Endogeneity issue

Finally, to fix potential endogeneity problems, the study runs the two-stage least-square (2SLS) regression. Prior research indicates that most corporate governance mechanisms are endogenous as companies choose the board or members of sub-committees to match their business activities and environment (Basiruddin & Ahmed, 2019; Grassa et al., 2018; Katmon et al., 2019). To examine the presence of endogeneity, we run Durbin and Wu–Hausman tests in line with the study of Basiruddin & Ahmed (2019) and Katmon et al. (2019). The results suggest that SSC (Durbin=8.55, p value=0.00; Wu-Hausman=6.47, p value= 0.02, F-test=0.00) and BS (Durbin=8.04, p value=0.01; Wu-Hausman=5.66, p value= 0.03, F-test=0.00) are found under the endogeneity bias. To address the issue, the study selects a one-year lagged value of SSC and BS, SSC_{t-1} and BS_{t-1} respectively, as the IVs consistent with the study of Katmon et al. (2019).

The study used the endogenous variable as dependent and other exogenous variables and IV as the independent in the first stage. We have then had a fitted value of the endogenous variable, which is further replaced with the endogenous variable (lagged data) in the second stage. The first stage regression of column 1 and column 2 of Table 7 demonstrates that the instrumental lagged values SSC_{t-1} and BS_{t-1} are highly significant in the current year of SSC and BS respectively. In the second stage under both the model, when the study used the fitted value of SSC and BS derived from the first stage, the study found a significant and positive impact on IFSB disclosure. Moreover, in column 1, the results of IBM, BIG4, and firm size have been changed from the baseline model. IBM shows a negative impact, while BIG4 and firm size demonstrates a positive effect on the level of compliance with the IFSB standard. Furthermore, in the second stage of column 2, when 2SLS was run, the study found similar results of column 1 of Table 6 except the insignificant effect of SSC and negative impact of IBM on IFSB standard-4.

Further, we used F-statistics for the first stage 2SLS regression and found the cut-off point is more than the threshold of 10 (Staiger and Stock, 1994). Therefore, the study concludes that the study's IVs are reliable and valid for 2SLS regression. Moreover, the findings of the 2SLS are almost similar to the main findings of the study presented in Table 6.

5. Discussions

Consistent with prior studies, the study found a positive relationship between SSC and IFSB standard in all the models (Basiruddin & Ahmed, 2019; El-Halaby & Hussainey, 2016; Grassa et al., 2018). The findings imply that the larger the Shari'ah supervisor committee in Islamic banks, the higher compliance with IFSB standard-4. SSC's existence in the Islamic banks ensures the disclosure of the *Shari'ah* compliance, corporate governance, different types of risks, and mitigating the risks. Moreover, they can improve the banks' monitoring capacity with accounting experts and Shari'ah scholars, thereby leading to higher compliance with the IFSB standards. As a greater number of SSC provides more effective monitoring and more consistent Shari'ah rules and principles, the study suggests the policymakers may extend the SSC; which, in turn, expects to increase the compliance level of IFSB standard.

Similarly, a positive relationship between board size and IFSB standards-4 implies that the larger the board size of the banks could help to increase higher the corporate disclosure level; the larger board has an opportunity to accumulate diversified experts from different areas of knowledge (Grassa et al., 2018). The study suggests the banks' management keeps the board size to a significant extent; it helps the banks disclose more information in their annual reports to increase compliance with IFSB standard-4. It should also be kept in mind that too large a board size needs colossal maintenance cost and less effective sometimes due to long coordinating time (Basiruddin & Ahmed, 2019).

Unlike the board size, the study found an insignificant impact of board independence on TCS of IFSB standard; this result supports the prior research of Grassa et al. (2018) and Zalata et al. (2018). The independent board members are expected to contribute to the board by neutral monitoring the management activities, resulting in quality accounting disclosures (Jahid et al., 2020. But, in Bangladesh, most independent board members are appointed from non-bankers and academicians with political consideration who have no practical banking experience. Therefore, the Islamic banks and regulatory bodies are suggested to appoint independent directors who have specialized knowledge and experience, not considering the political background.

Additionally, a positive and significant relationship between the accounting experts on the board and IFSB standard-4 provides insight that the accounting expert in the board of directors oversees the audit committee role, resulting in increased compliance with IFSB-4. Therefore, the findings suggest that management of the Islamic banks should invite the accounting experts and financial analysts in the board as much as possible to ensure information transparency, monitor financial reporting strategies, and comply with international standards (Armstrong et al., 2015).

However, while examining the impact of audit quality on the level of compliance with IFSB-4, we found an insignificant effect. The result is inconsistent with the prior studies as they revealed that the audit quality (BIG4) could influence the quality of information disclosure (Grassa, 2016; Katmon et al., 2019). In Bangladesh, only two Islamic banks have recently adopted external auditors from BIG4 Company, while other Islamic banks are still ignoring BIG4. Most auditors are appointed from internal board members who serve the purposes of the management. Therefore, the findings suggest that the policymakers of the Islamic banks of Bangladesh audit their financial and non-financial operations by BIG4 company auditors.

Concerning the effect of ownership structure on the compliance with IFSB-4, the findings offer an insight that the Islamic banks with a larger number of foreign and institutional ownership have a higher tendency to comply with international standards. These findings support the study of Mi Choi *et al*. (2012). On the other hand, a negative relationship between directors' ownership and compliance with IFSB standard-4 indicates that they have constrained the information disclosure as they are powerful owners and managers and influence the board of directors to secure personal benefits. Supporting the finding of Chen et al. (2008), this study shows that the opportunity to have ownership and management motivates them to protect their self-interest, which results in insufficient disclosure and inadequate compliance with the international accounting standards. In Bangladesh, since directors hold most of the shares, they often exercise excessive pressure over firms' management to attain more unethical benefits that go against others. Thus, the study provides insight that the higher the presence of foreign and institutional ownership and the lower the presence of directors' ownership, the higher the quality of information disclosure and higher compliance with international standards like IFSB-4.

Among the control variables, the positive and significant impact of ROA and deposit growth indicate that Islamic banks with higher financial performance disclose more information and comply more with IFSB standards (Grassa et al., 2018; Muttakin et al., 2015). The findings also support the prior study of Muttakin et al. (2015), who documented similar results and explained that the firms with more profitability and solvency want to disclose more information to send a signal in the market that they are in a better position compared to others to attract more customers. This competition leads the Islamic banking industry to comply with international standards like IFSB standard-4. On the contrary, the insignificant effect of firm size and leverage on IFSB standard indicates that Islamic banks under pressure do not work well to disclose more information as more external debt results in lower compliance with IFSB-4 (Azid & Alnodel, 2019).

6. Conclusions

Though it is expected that Islamic banks will comply with most of the aspects stated in IFSB financial accounting standards, but it is observed that the overall compliance status is not satisfactory. Of seven sample banks, only one bank (IBBL) complied more than 50%, while the average compliance percentage is only 44.83%. IBBL shows the highest compliance score as it is a member of both AAOIFI and IFSB. Therefore, regulators in Bangladesh should encourage Islamic banks to get AAOIFI and IFSB membership to improve their compliance status.

Further, the study investigates whether the corporate governance of Islamic banks of Bangladesh can affect the level of compliance with IFSB standard-4. The findings call for relevant stakeholders, academicians, management policymakers, practitioners, the *Shari'ah* council, and regulatory bodies to improve the corporate governance practices of Islamic banks and the level of compliance with IFSB standard-4. More specifically, *first*, the study opens an avenue for directing the researchers in investigating the accounting and reporting status of Islamic banking, considering the requirements of international standards. *Second*, the study suggests the banks enlarge their Shari'ah supervisory committee and board of directors and include the accounting experts on the boards to a significant extent to enhance the level of compliance with IFSB standards. *Third*, the board should reduce control over the audit committee. Otherwise, it will impede the audit committee from working freely, resulting in a reduction in the level of compliance with accounting standards. *Fourth*, the regulators should increase the proportion of foreign and institutional ownership as the foreign and institutional owners influence management in disclosing more quality information, which results in higher compliance with IFSB standards (Mi Choi et al. (2012); (Sami and Zhou, 2004). On the other hand, the regulatory bodies and management should reduce the proportion of directors' ownership as it reduces the TCS. *Fifth*, as Bangladesh has no well-defined regulatory and supervisory structure for Islamic banks for their effective functioning following Shari'ah principles, we recommend establishing an independent regulatory body to support the emerging Islamic banking sector in Bangladesh to make them more accountable and assist them in flourishing based on Shari'ah precepts. *Finally*, Bangladeshi regulators should harmonize the AAOIFI and IFSB standards with other reporting regulations (Ullah, 2014).

The study results should be used carefully as it considered only the Islamic banks in Bangladesh because the IFSB standards were formulated only for Islamic banks; therefore, other banks are not supposed to come under the orbit of this standard. To get the most current picture, the study used the annual reports of the sample Islamic banks of 2013-2018 only and these reports were taken as the basis of evaluating the level of compliance with IFSB-4. The study expects to benefit the stakeholders in evaluating and selecting a Shari'ah-compliant bank. Finally, the study expects more studies in examining the impact of bank attributes and corporate governance on the compliance of IFSB standards across the country in the future.

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