THESIS

Thesis Paper On

Does the Annual Report Sufficiently Reveal the Relationship Between Board Characteristics and Bank Performance? Evidence from Bangladesh

Submitted To:

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Letter of Transmittal

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Subject: Submission of Thesis Paper on “Does the Annual Report Sufficiently Reveal the Relationship between Board Characteristics and Bank Performance?”

Dear Sir,

I am happy to present my thesis paper with the title “Does the Annual Report Sufficiently Reveal the Relationship between Board Characteristics and Bank Performance?” which is one of the requirements of the MBA program at Daffodil International University. The research includes the information disclosed about the board characteristics in the annual reports of both Islamic and conventional banks in Bangladesh and their link to the bank's performance.

I want to thank you for your understanding and assistance during this research process. I trust that the report will be satisfactory to you and provide useful information about the relationship between corporate governance and bank performance. If you have any queries concerning the report, I will be at your service.

Yours Sincerely,

Israt Jahan

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Student's Declaration

This is a formal declaration that my thesis paper entitled "Does the Annual Report Sufficiently Reveal the Relationship Between Board Characteristics and Bank Performance?" was written under the mentorship and supervision of Dr. Md. Azizur Rahman, Associate Professor and Head, Department of Business Administration, Daffodil International University, during the MBA program.

I express my opinion that this report is completely my original work done for academic purposes only and every possible step has been taken to make sure its accuracy and validity. The information and understanding obtained through this research have played a significant role in the successful completion of the study.

Yours Sincerely,

Israt Jahan

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Approval Certificate

This is to confirm that Israt Jahan, ID: 242-14-052, an MBA student from the Department of Business Administration at Daffodil International University, has been working on her thesis under my guidance. The title of her thesis paper is "Does the Annual Report Sufficiently Reveal the Relationship between Board Characteristics and Bank Performance?" which she has completed solely by herself.

I have gone through the report and I am content with the standard of the work done and so I give my approval for it to be submitted. I also hope for the best for her in her future plans.

Dr. Md. Azizur Rahman

Associate Professor and Head

Department of Business Administration

Faculty of Business & Entrepreneurship

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Acknowledgment

Above all I want to express heartfelt thanks to Allah the Almighty who has given me the power, patience, and direction to finish this thesis successfully. His blessings have been the most important and the only ones who never left me during the whole process of study and research.

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Executive Summary

This research aims to assess the extent to which the annual reports in Bangladesh are able to unveil the relationship between the board characteristics and the bank performance. The disclosure quality and its limitations are the main aspects of the study. The analysis covers key governance variables like board size, board independence, CEO tenure, and political connections along with the financial performance indicators of return on assets (ROA) and return on equity (ROE) for both Islamic and conventional banks. Continuous and dynamic methods of analysis, particularly using System GMM, are applied in the study to determine the extent to which publicly available data reflects the governance-performance relationship taking into consideration the endogeneity and performance persistence effects.

The research results show that annual reports present basic numerical data that allow for a limited assessment of the efficiency of the board. Board size and CEO tenure reveal measurable correlations with the financial performance of conventional banks while the link in Islamic banks is weaker owing to governance structures that comply with Shariah and risk-sharing mechanisms within the bank. Political connections are found to have varying effects, while the role of board independence and competency is frequently hidden by the scanty narrative and qualitative reporting. The research indicates that the absence of forward-looking information, inadequacy of narrative content, and non-provision of audit assurance weaken the annual reports' capability of completely portraying the board's functioning and the management's strategic decision-making.

Annual reports, in general, are a basic source for analyzing the relationship between governance and performance, but their drawbacks require the use of qualitative data, narrative disclosures, and assurance mechanisms as support in order to gain a thorough understanding. These implications are significant for the aforementioned groups if they seek to bring about the changes in areas of transparency, and board oversight, and to further elevate financial performance in the dual banking system of Bangladesh.

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Abstract

This study analyzes the extent to which the annual reports of banks in Bangladesh disclosing adequately the relationship between board characteristics and bank performance. The study primarily points out the lack of information that obstructs the understanding of the issue comprehensively. A periodic dataset of Islamic and conventional banks for the years 2015 to 2024 is employed and the evaluation focuses on governance factors such as board size, board independence, CEO tenure and political connections along with the financial performance indicators ROA and ROE. Static, fixed-effects, and dynamic panel analyses with System GMM are used by the researchers to control for possible endogeneity and to measure the performance outcomes' persistence. The outcome of the research indicates that the annual reports do give out basic quantitative information related to governance and financial metrics but at the same time they do not reveal the qualitative aspects of the board working, the strategic decision-making and the supervision's effectiveness which leads to the generation of incomplete or inconsistent insights. Moreover, the researchers have found that the weak or non-existing correlations between governance and performance in some cases may be due to the poor quality of disclosure and lack of audit assurance. The findings indicate that the board's effectiveness may be misinterpreted if one relies only on the annual reports which in turn calls for the inclusion of more elaborate narrative disclosures, forward-looking information, and complementary data sources to properly assess the governance mechanisms and to promote transparency in both Islamic and conventional banks.

Keywords: Annual reports, board characteristics, bank performance, disclosure quality, corporate governance, Islamic banks, conventional banks, GMM, panel data.

1. Introduction

In the modern banking industry, corporate governance is the matter that determines the stability and the financial performance of the institution, as well as the overall accountability. Good teamwork can very much affect the strategic direction, increase the control measures, and reduce the factors of managerial opportunism all of which eventually will be factors of determining the profitability and the resilience of the bank (Jensen & Meckling, 2019). Board features such as size, independence, CEO tenure, and political connections have been closely related to the performance metrics like return on assets (ROA), return on equity (ROE), and market valuation (Hassan, 2024; Rifat & Anjom, 2024). That is why, to get a proper evaluation of the role of governance structure of the banks, one has to understand these relationships.

The annual reports are the main means by which the banks in Bangladesh reveal their governance practices and their financial results. The reports usually offer quantitative and qualitative data regarding the board composition and independence, committee functions, and performance indicators, and hence they are often referred to in academic and regulatory research (Maniruzzaman et al., 2024; Noor et al., 2021). In an ideal world, the disclosures would let the stakeholders determine the effectiveness of the governance and its effect on the performance of the bank. Unfortunately, the trustworthiness and the whole disclosure vary a lot from one bank to another, which leads to doubt regarding whether the annual reports really reflect the complicated mechanisms that connect the board structures and the financial outcomes (Habib et al., 2025).

Globally, the quality of governance has been recognized as a multifaceted concept that cannot be quantitatively assessed accurately through numbers solely. The use of improved narrative reporting, forward-looking statements, and external assurance has resulted in gaining significant interpretive value and credibility of governance information (Di Tullio et al., 2022; García-Sánchez et al., 2019). However, the situation is different in Bangladesh where empirical studies have derived board traits purely from annual reports and not looked into the reporting environment. Even though researchers have identified board size, independence, and CEO traits as influencing factors on bank performance, the question of whether such influence can be detected when annual report disclosures are restricted to superficiality, little narrative detail, and poor audit quality, still exists (Noor et al., 2021; Rifat & Anjom, 2024). In case of dual banking systems involving both Islamic and conventional banks, the little narrative detail and limited forward-looking information in regular reports can hinder critical insights into decision-making and risk-handling processes.

Thus, this study is an attempt to fill this gap by checking if the annual reports sufficiently disclose the relationship between board characteristics and bank performance in the dual banking system of Bangladesh. The research will look into the publicized board characteristics in the light of financial performances and thereby will be able to determine how much the annual report data mirrors the actual governance and performances linkages. This analysis acquires high significance because the inconsistencies or the incomplete disclosures may hide the power of the governance mechanisms resulting in weak or non-significant empirical results.

To sum up, this paper is a contribution to the literature, as it evaluates the annual report disclosures in terms of their sufficiency rather than presuming their completeness. It points out possible reporting shortfalls, mismatches in disclosures, and limitations of audit quality that might hinder the full representation of the board–performance relationship through annual reports. The knowledge produced will be beneficial for the regulators, policymakers, and banking practitioners to increase the transparency of governance and accountability in the financial sector of Bangladesh, thus making it stronger.

2. Literature Review

2.1. Theoretical Framework

The board characteristics and bank performance relationship is usually interpreted through the lenses of agency theory, resource dependence theory, and stakeholder theory. Agency theory (Jensen & Meckling, 2019), posits that the ownership and control separation leads to a situation where the management of the organization is not properly aligned with the owners' interests; thus, risky lending may be one of the factors that are encouraged by the situation. Nevertheless, competent boards are said to be the ones that implement such good practices through, for instance, monitoring and incentive alignment, which consequently results to a decrease in NPLs (non-performing loans). Resource dependence theory states that the board is the source of the company's expertise, credibility, and the network with the outside that all together strengthen the risk management (Hillman et al., 2009). The research shows that the boards of different backgrounds and skills do actually lower the risk in Islamic banks (Nainggolan et al., 2023). Stakeholder theory (Freeman, 2010) transposes the accountability principles to wider ethical and transparency commitments, which are exactly the ones that characterize the Shariah-Governance (Islam & Bhuiyan, 2019). Combining these theories one gets the comprehensive rationale for the co-relationship between the board structure and NPLs in both, Islamic and conventional banks.

In the context of Bangladesh, the annual report serves as the main source for all governance-related information. These reports are anticipated to be very detailed in their disclosures regarding board structure, independence, duality, gender diversity, meeting frequency, and performance indicators like ROA, ROE, and Tobin's Q. However, the real quality of disclosure is very often below expectations. The theoretical framework postulates that annual reports are the only source of governance variables, but at the same time inconsistencies and selective reporting very often reveal the disconnect between disclosed information and actual board dynamics. So, even if theory indicates that annual reports should provide grounds for a very precise assessment of the board–performance nexus, the discrepancies in disclosures and incomplete reporting hinder that possibility.

2.2. Board Characteristics and Performance: Evidence from Bangladesh

The size of the board is one of the most discussed governance variables in the Bangladeshi banking sector. Rifat and Anjom (2024) conclude that larger boards have a positive effect on performance enhancement mainly because of the diversity and the capacity to oversee, while Noor et al. (2021) report a mixed impact—positive for ROA but negative for ROE—showing that there might be some inefficiencies in coordination. The numerical size of boards is disclosed in annual reports, but these basic metrics do not include qualitative aspects such as engagement of the directors or their influence on strategy. Thus, a mismatch in disclosure is created whereby the reported structure seems complete, yet important behavioral dimensions are lacking.

The independence of the board was another key aspect of governance that became the subject of research. Maniruzzaman et al. (2024) report that the strong association of audit committee independence with the improved market performance, as measured by Tobin's Q, is very pronounced. Similarly, Hassan (2024) points that the independent directors together with board expertise and CEO duality, have a significant positive impact on bank performance, which is indicative of the monitoring and advisory roles of independent members. When looked at collectively, these studies suggest that annual reports give a credible account of the independence, duality, and meeting frequency that can be closely tied up with both accounting-based and market-based measures of performance.

The performance metrics are primarily based on the data disclosed in the annual reports. For example, Hassan (2024) solely utilized annual reports to construct a panel dataset of listed banks for the period 2018–2022, thus showing that this method is suitable for empirical research. The use of disclosed financial indicators reveals the importance of annual reports in making governance variables and performance outcomes operational. Thus, it is affirmed that in Bangladesh, annual reports are commonly used and sufficient for quantitative studies of board characteristics despite the fact that they lack qualitative disclosures.

2.3. Disclosure Quality and Assurance in International Evidence

The international literature shows that the value of annual reports is largely dependent on the quality of the information disclosed and the external audit. García-Sánchez et al. (2019) point out that the absence of an audit lowers the trustworthiness of the governance information, thus the annual reports without external verification might give only a limited or distorted perspective of the board's efficiency. It is, therefore, a downside of relying on annual reports that unassured board attributes may look to be technically correct but still be misleading in terms of substance.

The governance mechanisms do not only help in determining the nature of the assurance for annual reports and CSR disclosures but also add to the quality of the information provided on governance. According to García-Sánchez et al. (2022), board independence, CSR committees, and institutional investors promote assurance practices, thus enhancing the reliability of the reported information. Nevertheless, when such audits are not performed—something that is very common in Bangladeshi banks—annual reports might give an impression of the governance structures that is either half the truth or too optimistic. This is further complicating the issue of disclosure mismatch: the audience takes for granted that the information is credible, whereas the reports do not have the kind of validation that would allow checking the compliance of reported and actual governance practices.

2.4. Narrative Reporting, Business Model Information and Qualitative Depth

International literature has made narrative reporting a vital topic and that is the reason why annual reports should include not only figures but also explain operations, business models, and governance processes. Di Tullio et al. (2022) put it very clearly that narrative parts must show business models, strategies, and boardroom procedures. Yet, Bangladesh's annual reports give very little qualitative information which makes it difficult to illustrate the impact of board characteristics on the company's performance. The qualitative data by itself is not enough to show the governance dynamics; still, the narrative parts are very often over-generalized, repetitive, or symbolic instead of being explanatory ones.

This narrative gap causes the users to have a very limited view of the board's roles in risk management, strategic direction, and performance outcomes. In fact, even if the annual reports mention the board's expertise, independence, or frequency of meetings, lack of accompanying narrative disclosures leads to a huge gap between what is reported and what is necessary to understand the impact of governance. Hence, the lack of narrative reporting prolongs the negative effect of incomplete disclosure and at the same time, it limits the interpretive power of annual reports.

2.5. Sufficiency of Annual Reports

Annual reports, though, do not fail to reveal the core governance and performance indicators. Habib et al. (2025) research available through the annual and integrated reports and they find female directorship, foreign ownership, and board size as examples of such variables that can be systematically monitored. In this regard, the reports serve as an easy to use and a uniform starting point dataset that allows for longitudinal and cross-sectional research in the banking sector. Thus, the annual reports can be viewed as the main source of data for investigating and comparing board characteristics and performance in Bangladesh.

On the contrary, the limitations of the reports have been pointed out by a considerable number of studies. Habib et al. (2025) find that the percentage of forward-looking disclosures is only 43% on average, thus concluding that annual reports do not give enough qualitative and predictive information. Analogously, Noor et al. (2021) argue that the strategic decision-making processes are not disclosed and, hence, causal inference is restricted. These discrepancies depict the adverse impact of annual report disclosure: important governance factors are not communicated and this leads to the misconception of board effectiveness.

Reliability and comparability raise worries of a different kind. Annual reports, being prepared at management's discretion, can be subject to disclosure bias and selective reporting which are potential hazards. The study on intellectual capital disclosure in Bangladesh shows that more than 70% of the non-financial governance items are usually neglected (Rahman et al., 2023). This trend of omission has a structural basis in the report making process and signifies that the annual reports in Bangladesh fall short of the completeness, transparency, or uniformity that is needed for a correct interpretation of the board–performance relationships. As a result, the annual reports provide only a fragment of the total information while the non-reported parts cause the analysts to have blind spots.

2.6. Synthesis and Research Gap

As confirmed by the literature, annual reports serve as a medium through which researchers can test the relationships between board characteristics and performance in a manner that is consistent with the agency and resource dependence theories. However, the inadequacy, incompleteness, and inconsistency of disclosures greatly reduce their explanatory power. While there are generally available numerical data regarding the structure of the board, there are no qualitative insights about the influence of the directors, board culture, conflict management, and decision-making processes disclosed. This leads to a continuous disclosure mismatch: annual reports officially show governance attributes but do not uncover the actual processes behind them.

Hence, annual reports enable understanding of the governance–performance link but are not enough. Their preparation lacks narrative thickness, comparability, and assurance, which negatively affect the interpretation of governance. To deal with disclosure gaps and get a more accurate portrayal of board effectiveness, future research should integrate annual report data with alternative sources such as regulatory filings, surveys or interviews.

3. Methodology

Research Design

The study employs a quantitative research design based on panel data to analyze the relationship between board characteristics and non-performing loans (NPLs) in both Islamic and conventional banks of Bangladesh. The applied dataset comprises the data for 20 conventional banks and covers the period of 2015-2024 and 9 Islamic banks and covers the period of 2015-2023, because the annual reports of Islamic banks for 2024 were not available at the time of data collection.

Panel data, also known as cross-sectional time-series data, is an excellent choice for this analysis since it provides both the differences between banks and the changes in a bank over time. This design enables the model to eliminate unobserved, time-invariant heterogeneity, thus reducing omitted variable bias to a minimum (Hsiao, 2007). Panel data, when compared to purely cross-sectional or time-series, enhances the accuracy of the results by allowing the use of both dimensions of information at once.

In the current study, the non-performing loans (NPL) variable is the one dependent on others. The independent variables are board size (BOS), board independence (BI), CEO tenure (CEOT), CEO duality (CEOD), politically connected board members (PCP), and bank size (SIZE). The performance indicators of banks return on assets (ROA) and return on equity (ROE) are considered as control variables.

Variable Descriptions

Dependent Variable: Non-Performing Loans (NPL): The ratio of non-performing loans to total loans is how NPL is quantified. This ratio is one of the main indicators of credit risk and asset quality, being widely used (WorldBank, 2024). Higher NPLs show that the lenders are not keeping a close eye on the customers, there is a lack of credit discipline and lending standards have deteriorated to an overall extent.

Independent Variables

Board Size (BOS): The number of directors that are serving on the board at the same time is represented by the board size. A bigger board might provide better monitoring and control of risks because of the different expert opinions and views (Pathan & Faff, 2013).

Board Independence (BI): The board independence is expressed in terms of the proportion of independent directors on the board. The presence of independent directors is expected to bolster the effectiveness of governance, by not only mitigating the risk of excessive risk-taking but also aiding in effective monitoring (Adams & Mehran, 2012).

CEO Tenure (CEOT): The number of years a CEO has been in the position is what CEO tenure relates to. Longer tenure could be a source of experience and internal knowledge, on the other hand, it could also result in managerial entrenchment and the decrease of accountability (Hermalin & Weisbach, 2001).

CEO Duality (CEOD): The CEO duality variable is assigned a value of 1 when the CEO also holds the position of board chair, and a value of 0 otherwise. The CEO duality gives one person all power that is while the board independence and supervision may get weaker as a result (Adams, 2012).

Politically Connected Board Members (PCP): The PCP indicator represents the portion of board members with political ties. The political ties may cause lenders to become less stringent and more prone to granting bad loans which in turn would increase the NPLs (Boubakri et al., 2008).

Bank Size (SIZE): The bank size is indicated by the natural logarithm of total assets, which is a common practice in banking research as it helps to offset the impact of different institutional sizes (Demirgüç-Kunt & Huizinga, 2010).

Control Variables: Return on Assets (ROA) and Return on Equity (ROE): ROA and ROE were taken up as control variables to include bank profitability in the analysis, as it can affect both governance practices and the quality of loans. Generally, it is the case that banks with higher profits will have stronger management of assets, higher credit standards, and lower NPL ratios (Athanasoglou et al., 2008).

3.1 Data Collection

The data for every variable was obtained only from secondary sources, primarily the yearly reports of the banks in the sample. The period of the study is as follows:

1. Conventional banks: 2015–2024
2. Islamic banks: 2015–2023

Important details such as NPL ratios, board composition, CEO characteristics, political connections, bank size, and profitability indicators were all retrieved by hand in order to achieve the same level of consistency and comparability across the banks.

Table 1: Variable Table

Variable Name	**Acronym**	**Operational Definition**	**Data Source**	**Reference**
Non-Performing Loan	NPL	NPL / Total loans (%)	Annual Reports	WorldBank (2024)
Board Size	BOS	Total number of directors	Annual Reports	Pathan and Faff (2013)
Board Independence	BI	% of independent directors	Annual Reports	Adams and Mehran (2012)
CEO Tenure	CEOT	Years served as CEO	Annual Reports	Hermalin and Weisbach (2001)
CEO Duality	CEOD	1 = CEO is also chair; 0 otherwise	Annual Reports	Adams (2012)
Political Connections	PCP	% of politically connected directors	Annual Reports	Boubakri et al. (2008)
Bank Size	SIZE	Log of total assets	Annual Reports	Demirgüç-Kunt and Huizinga (2010)
Return on Assets	ROA	Net income / total assets	Annual Reports	Athanasoglou et al. (2008)
Return on Equity	ROE	Net income / equity	Annual Reports	Athanasoglou et al. (2008)

Note: NPL means Non-Performing Loans, BOS means Board Size, BI means Board Independence, CEOT means CEO Tenure, CEOD means CEO Duality, PCP means Politically

Connected Board Members Percentage, SIZE means Bank Size, ROA means Return on Assets, ROE means Return on Equity.

The choice of variables for this research was informed by the extensive corporate governance and banking risk literature. The same board characteristics which are size, independence, the tenure of the CEO, CEO duality, and political connections are the factors pointed out and risk behavior (Adams & Mehran, 2012; Boubakri et al., 2008; Pathan & Faff, 2013) to significantly influence the monitoring of management and risk taking. It is assumed that these variables will directly affect credit decision making, thus the level of non-performing loans in banks would be influenced.

Bank size is taken into account to reflect the differences in the hierarchy of the banks. The bigger the banks the more likely it is that they have more diversified operations and stronger risk management (Demirgüç-Kunt & Huizinga, 2010). The profitability ratios, ROA and ROE, are also included among the control variables so that the effect of financial performance is accounted for and the extent of governance impact is accurately evaluated (Athanasoglou et al., 2008).

In addition, the variables chosen for the analysis enable the distinction between Islamic and conventional banks to be made on a cross-sectional basis as well as the study of changes in governance effects over time. Non-performing loans are not static but rather depend on the lending behavior that preceded them; hence the use of panel data in conjunction with the variables chosen allows the model to take into account the consistency of the institution, the stability of governance, and changes in the macroeconomic or regulatory environment over time. This approach increases the trustworthiness and strength of the analysis and at the same time conforms to the empirical methods that are most prevalent and accepted in the field of banking governance research.

3.2 MODEL

Static Panel Model

The static panel model considers the situation where the dependent variable, i.e. NPL, is solely influenced by the current values of the independent variables, thus not taking into account any lagged impacts. Usually, such models are resorted to when the researchers want to see the immediate effect of the predictor variables and at the same time deal with the unobservable, time-invariant differences among the banks through fixed or random effects (Baltagi & Baltagi, 2008; Wooldridge, 2002).

The simplest static panel model can be written as:

$$y = a + b(x_1) + \epsilon \dots\dots\dots\dots (1)$$

Where:

- y = Non-Performing Loans (NPL)
- x_1= Politically Connected Board Members (PCP)

- ϵ = Error term

A simplified version of the model on PCP is:

$$NPL = a + b(PCP) + \epsilon \ldots \ldots \ldots \ldots \ldots (1a)$$

The complete model, which includes all variables for explanatory and control purposes, is designed as follows:

$$NPL = a + b_1(PCP) + b_2(BOS) + b_3(CEOT) + b_4(CEOD) + b_5(BI) + b_6(SIZE) + b_7(ROA) + b_8(ROE) + \epsilon \ldots \ldots \ldots (2)$$

Fixed Effects (FE) Model

The Fixed Effects (FE) model takes into consideration those characteristics of the banks that do not change over time like in-house governance or past ownership that might otherwise distort the estimation of the coefficients.

The general FE model can be written as:

$$Y_{it} = \beta_1 X_{it} + \alpha_i + u_{it} \ldots\ldots\ldots\ldots(3)$$

Where:

- α_i = unobserved, bank-specific intercept
- Y_{it} = NPL of bank *i* at time *t*
- X_{it} = vector of explanatory variables
- β_1 = coefficient for the predictor variable,
- u_{it} = error term

An expanded FE formulation that includes a number of predictors is:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} \ldots + \beta_k X_{k,it} + y_2 E_2 + y_n E_n + u_{it} \ldots\ldots\ldots(4)$$

The FE model has been applied to the current study as follows:

$$NPL_{it} = \beta_0 + \beta_1 BOS_{it} + \beta_2 BI_{it} + \beta_3 CEOT_{it} + \beta_4 CEOD_{it} + \beta_5 PCP_{it} + \beta_6 SIZE_{it} + \beta_7 ROA_{it} + \beta_8 ROE_{it} + y_2 E_2 + y_n E_n + u_{it}$$

Given that entity dummies are binary variables, the model measures n–1 bank-specific fixed effects to control for the unobserved heterogeneity across different institutions.

Random Effects (RE) Model

The Random Effects (RE) model postulates that the latent bank-specific effect (α_i) is uncorrelated with the variables that are explanatory. The RE model can be mathematically shown as:

$$Y_{it=}\beta X_{it} + \alpha + u_{it} + \epsilon_{it} \text{ ....(5)}$$

Where:

- α = random bank-specific effect
- u_{it}= error component that reflects shocks that do not change over time
- ϵ_{it} = idiosyncratic error

It is generally more efficient than the Fixed Effects (FE) model when RE assumptions hold. To find out whether FE or RE fits the data better, the Hausman test is conducted. This test checks the correlation between the bank-specific effects and the regressors; if correlation exists, FE is the choice, otherwise RE is the way to go.

Dynamic Panel Model

Considering the fact that non-performing loans (NPLs) typically show a tendency to persist over time, a dynamic panel specification is used to reflect the influence of previous loan performance on current NPL level(Anderson & Hsiao, 1982; Blundell & Bond, 1998).

The dynamic model can be expressed as:

$$NPL_{it} = \propto + \beta_1 NPL_{i,t-1} + \beta_2 BOS_{it} + \beta_3 BI_{it} + \beta_4 CEOT_{it} + \beta_5 CEOD_{it} + \beta_6 PCP_{it} + \beta_7 SIZE_{it} + \beta_8 ROA_{it} + \beta_9 ROE_{it} + \epsilon \dots\dots\dots\dots\dots\dots (6)$$

The model is estimated using System-GMM (Arellano & Bover, 1995; Blundell & Bond, 1998), which is especially a good fit for cases involving:

- Short time periods
- Endogeneity possible with board-related variables
- Dynamic relationships among variables
- Unobserved bank-specific heterogeneity

The following diagnostic tests are administered to check model validity:

- Arellano–Bond test that is meant for checking the presence of serial correlation in the errors
- Hansen J-test that is used for evaluating whether the instruments are valid

4. Results

4.1 Descriptive Statistics

The purpose of tables 2(a) and 2(b) is to give a summary of the data on Islamic and conventional banks for the entire period of the study and to provide the reader an initial view of the dataset. The summaries become the basis for the comprehension of trends in board composition, financial performance, and loan quality before the application of advanced analyses of the corresponding time series data.

For Islamic banks in relation to the data, credit risk is seen to be under control to a certain extent. The NPL ratio's mean value of 4.18% points to the general stability of loan performances. The board is usually composed of a big number of members (Mean=15.64), as both the regular board structures and the Shariah supervisory committees are supposed to exist. The mean board independence is quite low (Mean=0.18), which is likewise the case with the governance standards of most Islamic banking institutions in developing markets. The measures of profitability, ROA, and ROE, are all positive, although there is a certain degree of difference, which is the outcome of the nature of Islamic finance being asset-backed and through sharing of risks.

In the case of conventional banks, the variability is almost the same for all indicators but the amount of the variability is higher. The average NPL ratio is at 6.56%, which is indicative of the bank's greater exposure to credit risk and periods of declining loan quality. The number of board members is smaller (Mean=12.03), but the proportion of board members with political connections is higher (Mean=0.25), thus the political ties are said to be a major reason for the governance practices. The profits of banks have a wider range of fluctuations, with both negative and positive values, which reflects the cyclical sensitivity of interest-based banking and the performance of conventional loan portfolios.

Table 2 (a) Descriptive Statistics for Islamic Bank

Islamic Bank										
Stats	NPL	BOS	SIZE	LNBS	BI	CEOT	CEOD	PCP	ROA	ROE
N	81	81	81	81	81	81	81	81	81	81
Mean	4.18	15.64	15.64	5.57	0.18	3.41	0.00	0.19	1.63	11.34
SD	1.78	3.86	3.86	0.49	0.08	2.26	0.00	0.13	8.60	4.05
Min	0.00	8.00	8	3.51	0.00	1.00	0.00	0.00	0.02	4.51
p50	4.22	16.00	16	5.54	0.17	3.00	0.00	0.15	0.61	10.27
Max	8.44	25.00	25	6.82	0.42	10.00	0.00	0.50	78.00	26.50
Skewness	-0.06	0.15	0.15	-0.90	0.40	1.14	.	0.66	8.81	1.71
Kurtosis	3.40	2.11	2.11	6.94	3.52	3.84	.	2.43	78.76	6.76

Table 2 (b) Descriptive Statistics for Conventional Bank

Conventional Bank										
Stats	NPL	BOS	SIZE	LNB S	BI	CEO T	CEO D	PCP	ROA	ROE
N	197	197	197	197	197	197	197	197	197	192
Mean	6.56	12.03	357133.3	5.52	0.22	4.03	0.00	0.25	0.83	10.52
SD	7.26	4.00	146540.2	0.17	0.12	3.11	0.00	0.19	0.55	11.31
Min	2.08	5.00	131006.5	5.12	0.00	1.00	0.00	0.00	-4.54	-131.14
p50	4.99	12.00	329720.8	5.52	0.18	3.00	0.00	0.20	0.83	11.02
Max	67.14	20.00	981203	5.99	0.70	17.00	0.00	0.82	2.44	26.10
Skewness	5.61	0.21	1.266375	0.10	1.80	1.60	.	1.35	-4.40	-10.30
Kurtosis	39.72	2.26	5.334518	2.80	6.90	5.85	.	4.57	46.15	129.79

To sum it up, the descriptive statistics have shown that there are significant differences between Islamic banks and conventional banks. Islamic banks, on the other hand, maximum least credit risk and these include more stable governance structures. In contrast, conventional banks, with their higher NPL volatility, are subject to more political influence and have less predictable financial outcomes. These results emphasize the need to apply strong econometric models when undertaking the investigation of how the different board traits affect NPL results in various banking setups.

4.2 Correlation Analysis

To analyze the primary association of board characteristics, performance indicators, and non-performing loans (NPLs) correlation matrices of Islamic and conventional banks are illustrated in Tables 3(a) and 3(b). The matrices of the correlations of the variables give a preliminary view of their interrelationships prior to doing multivariate regression analyses.

The case of Islamic banks shows that the correlations are all close to zero, which means that most of the board variables and NPLs have weak relationship. This is an indication that the quality of loans in Islamic banking is not very much affected by traditional board structures. The correlation of the size of the board (BOS) and its independence (BI) with NPLs is very little, which suggests that the governance mechanisms, especially the oversight of the Shariah supervisory boards, may weaken the traditional board characteristics' impact on credit outcomes. The relationships according to the correlations are such that the return on equity (ROE) and the NPL show a strong negative correlation ($r = -0.444$, $p < 0.01$) this then implies that returns on equity that are higher are inversely related to levels of loan defaults. The political connections (PCP) have small positive correlations with BI and CEOT which means that banks in the Islamic sector that are more politically involved tend to have the more experienced management and stronger board influence but this does not seem to have a significant effect on NPL levels. Generally, these patterns point to a situation where governance in Islamic banks is continuously stable and not easily swayed by political influence.

Table 3 (a) Correlation Table for Islamic Bank

	Islamic Bank								
	BOS	SIZE	LNBS	BI	CEOT	PCP	ROA	ROE	NPL
BOS	1.000								
SIZE	-0.206	1.000							
	0.065								
LNBS	-0.216	0.728	1.000						
	0.053	0.000							
BI	-0.349	0.166	0.311	1.000					
	0.001	0.139	0.005						
CEOT	-0.237	0.193	0.175	0.388	1.000				
	0.033	0.085	0.118	0.000					
PCP	-0.337	0.152	0.220	0.599	0.457	1.000			
	0.002	0.175	0.049	0.000	0.000				
ROA	0.275	-0.068	-0.080	-0.079	0.126	-0.099	1.000		
	0.013	0.548	0.479	0.481	0.264	0.378			
ROE	0.031	0.156	0.157	-0.105	-0.044	-0.124	0.167	1.000	
	0.787	0.165	0.163	0.353	0.696	0.269	0.135		
NPL	-0.045	-0.224	-0.005	0.060	0.035	0.015	-0.096	-0.444	1.000
	0.692	0.044	0.966	0.592	0.757	0.897	0.392	0.000	

In contrast, conventional banks exhibit more obvious correlation patterns and are more logical in their nature. Board independence (BI) has a negative relationship with board size ($r = –0.427$, $p < 0.01$), which implies that larger boards face the challenge of lacking independent monitoring. Political connections (PCP) are positively correlated with BI and negatively to board size which means that boards that are influenced by political factors may have fewer members but still, retain a high level of formal independence. The profitability measures (ROA and ROE) have a strong and statistically significant negative relation with NPLs ($r = –0.651$ and $–0.718$, respectively; $p < 0.01$), thus, proving that there is a strong connection between high loan defaults and low financial performance. Board size has a moderate negative relationship with NPLs ($r = –0.289$, $p < 0.01$), which means that larger boards can facilitate monitoring and decline credit risk. In this case, Islamic banks are different, while the CEO tenure has a negative correlation with NPLs (r = –

0.163, $p < 0.05$), suggesting that the more experienced CEOs, in the case of interest-based banking, guide the loan management to become better.

Table 3 (b) Correlation Table for Conventional Bank

Conventional Bank									
	BOS	SIZE	LNBS	BI	CEOT	PCP	ROA	ROE	NPL
BOS	1.000								
SIZE	-0.093	1.000							
	0.196								
LNBS	-0.100	0.965	1.000						
	0.161	0.000							
BI	-0.427	0.213	0.193	1.000					
	0.000	0.003	0.007						
CEOT	-0.186	0.120	0.112	0.167	1.000				
	0.009	0.094	0.117	0.019					
PCP	-0.236	-0.129	-0.106	0.229	-0.047	1.000			
	0.001	0.072	0.137	0.001	0.512				
ROA	0.078	-0.113	-0.158	0.050	0.231	-0.108	1.000		
	0.278	0.114	0.026	0.490	0.001	0.133			
ROE	0.079	-0.039	-0.072	-0.058	0.170	0.007	0.860	1.000	
	0.279	0.591	0.319	0.425	0.018	0.927	0.000		
NPL	-0.289	0.075	0.102	0.109	-0.163	0.080	-0.651	-0.718	1.000
	0.000	0.297	0.154	0.127	0.022	0.265	0.000	0.000	

The correlation results, in a way, bring out the fundamental structural differences between the two banking systems. A wide-ranging and uniform correlation of Islamic banks among the various variables is a hallmark of their governance and Shariah-compliant lending practices that are very much standardized. On the other hand, conventional banks are characterized by stronger and more varied correlations which indicate a higher degree of divergence in governance quality and a more straightforward connection among the characteristics of the board, political influence, financial performance, and NPL outcomes. Therefore, these findings allow one to apply regression and panel data models in further analyses to ascertain the independent impacts of board characteristics on loan quality while at the same time controlling for the heterogeneity that is specific to banks.

4.3 Regression Analysis

In order to evaluate the impact of the board characteristics on the NPLs, regression analyses were carried out independently for both the Islamic and conventional banks. The results are shown in Tables 4(a) and 4(b) for the static model as well as pooled OLS specifications. The context created by the models made it possible to scrutinize the extent to which the attributes of governance and the indicators of financial performance are correlated with the behavior of loan defaults in the two systems of banking.

The findings for Islamic banks reveal that the greater part of the variables related to the board does not have an effect in terms of NPLs that is statistically significant. The variable of politically connected board members (PCP) is assigned negative coefficients that are not significant in any of the models (e.g., –0.560 in the static model), thus indicating that the influence of political connections on the quality of loans in institutions that comply with Shariah is limited. The size of the board (BOS) and the independence of the board (BI) also show weak and non-significant correlations, with coefficients that are close to zero in the pooled OLS specifications. The tenure of the CEO (CEOT) has a slight positive correlation in the static model (0.124, $p < 0.10$), indicating that more extended serving CEOs could lead to a slight rise in NPLs, although this effect reduces upon the introduction of financial performance measures. Among the financial indicators, return on equity (ROE) has a strong and significant negative correlation with NPLs (–0.164, $p < 0.01$), which means that the Islamic banks that are performing better have fewer defaults on loans. Return on assets (ROA) and bank size (SIZE) do not significantly differ in the statistics. The complete model, on the whole, gets an R-squared of 0.214 which indicates that it possesses a small degree of explanatory power, this could be the reason why it does not take into account the influence of internal risk-sharing arrangements and Shariah governance that might not be easily captured by conventional board metrics.

On the other hand, the conventional banks present the governance variables and NPLs to have a stronger and more stable correlation. The size of the board is very significantly negative in the static model as well as pooled OLS (–0.561, $p < 0.01$), meaning that the presence of more board members leads to better monitoring and less credit risk. The CEO's tenure is also negatively and significantly correlated in the static model (–0.538, $p < 0.01$), which means that the leadership is less likely to be rotated and thus the quality of the loan portfolio is improved. Board independence (BI) is positive and significant in the static model (13.52, $p < 0.05$) but loses significance in pooled OLS indicating that it is sensitive to model specification. Political connections stay statistically insignificant, but the coefficient values differ from model to model, which is an indication of the complicated role of political power. Financial performance measures especially ROE have very negative and consistent effects on NPLs (–0.410, $p < 0.01$), thus, the role of profitability in credit risk alleviation is emphasized. The complete model for traditional banks reaches an R-squared value of 0.579, which implies that the variables considered account for a large part of the NPLs difference

Table 4 (a) Regression for Islamic Bank

Islamic Bank			
		Static Model	Pooled OLS
	(1)	(1)	(1)
VARIABLES	Non-Performing Loan	Non-Performing Loan	Non-Performing Loan
Politically Connected Board Members Percentage	-0.560	-1.454	-1.337
	(1.946)	(2.022)	(2.124)
Board Size		-0.0492	0.00514
		(0.0657)	(0.0819)
CEO Tenure		0.124*	0.0691
		(0.0745)	(0.0904)
Board Independent		1.308	1.854
		(2.346)	(2.437)
Return On Asset			0.00580
			(0.00759)
Return On Equity			-0.164***
			(0.0475)
Bank Size			-1.56e-07
			(1.98e-07)
Constant	4.290***	4.578***	5.750***
	(0.636)	(1.413)	(1.784)
Observations	81	81	81
Number of Bank	9	9	9
r2	0.0002	0.0038	0.2142
Standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

Taken together, these regression results distinctly show the two banking systems' stark differences. The influence of the traditional board characteristics on the nonperforming loans (NPLs) is negligible in Islamic banks possibly because of Shariah rules and the inherent risk-sharing arrangements. The traits related to management such as the number of board members and the length of CEO's service along with the financial performance are factors that surface as substantial determinants of the quality of the loans in conventional banks. Hence, these results point to the necessity of differing governance treatments for various banking systems and simultaneously open the door for further research through panel-model and dynamic analysis.

Table 4 (b) Regression for Conventional Bank

Conventional Bank			
		Static Model	Pooled OLS
	(1)	(1)	(1)
VARIABLES	Non-Performing Loan	Non-Performing Loan	Non-Performing Loan
Politically Connected Board Members Percentage	4.028	-0.898	0.0332
	(4.174)	(4.103)	(2.237)
Board Size		-0.561***	-0.543***
		(0.2080)	(0.175)
CEO Tenure		-0.538***	-0.285
		(0.1860)	(0.188)
Board Independent		13.52**	-0.986
		(6.246)	(4.535)
Return On Asset			-0.110
			(1.781)
Return On Equity			-0.410***
			(0.0757)
Bank Size			3.55e-06
			(3.54e-06)
Constant	5.559***	12.65***	17.70***
	(1.389)	(3.685)	(3.292)
Observations	197	197	197
Number of Bank	20	20	20
r2	0.0064	0.1066	0.5793
Standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

4.4 Random Effect vs Fixed Effect

In order to study the impact of board characteristics on the occurrence of non-performing loans (NPLs) during the entire period of study, fixed effects and random effects panel models were estimated independently for Islamic and conventional banks. The methods are presented in tables 5(a) and 5(b), showing how governance features and financial performance metrics are responsible for the increase in loan defaults, while considering unobserved heterogeneity that is bank-specific and remains constant over time.

The panel results for Islamic banks suggest that almost all the board-related variables are statistically insignificant in interpreting NPLs. The politically connected members of the board

(PCP) show a negative but non-significant effect in the random effects (–1.337) and fixed effects (–1.510) models. Likewise, board size (BOS), board independence (BI), and CEO tenure (CEOT) all show weak and non-significant estimates which mean that the measures of corporate governance applied in these banks have little or no impact on the extent of credit risk in Shariah-compliant institutions. Among the financial variables, return on equity (ROE) is characterized by a strong and significant negative relationship with NPLs at both RE (–0.164, $p < 0.01$) and FE (–0.156, $p < 0.01$) models, which indicates that the loan defaults are lower in better-performing Islamic banks. Return on assets (ROA) and bank size (SIZE) do not show any significant impact. The values of R-squared for RE and FE are 0.214 and 0.141 respectively, which signify that the explanatory power is moderate and imply that the risk-sharing arrangements internal to the banks and the Shariah oversight are probably the main factors determining the NPLs.

The panel estimates of the conventional banks show that the relationships between the governance variables and the NPLs are stronger and more consistent. Board size is negative and significant in both RE (–0.543, $p < 0.01$) and FE (–0.597, $p < 0.05$) models, which means that larger boards would help monitor better and eventually credit risk to be lessened. CEO tenure also across RE (–0.285, $p < 0.05$) and FE (–0.422, $p < 0.05$) models shows a negative and significant effect, which means that leadership with experience is a plus in the quality of the loan portfolio. Board independence (BI) gives mixed results, as it is insignificant in RE but positive in FE, which means that it is sensitive to model specification. Politically connected board members are not significant in both models, although coefficient signs are slightly different, which indicates subtle political influence effects. Among financial variables, ROE has a very strong negative impact on NPLs (RE: –0.410, FE: –0.441, $p < 0.01$) consistently, while bank size has become significant in the FE model (7.03e-06, $p < 0.05$) that implies larger banks may be subject to slightly higher credit risk. The R-squared values reflect considerably that governance and financial indicators together explain about 57.9% of the variation in NPLs for RE and 49.4% for FE.

In general, the FE and RE findings draw an even sharper distinction between Islamic and conventional banks. In the case of Islamic banks, the characteristics of the conventional board do not explain much the quality of loans showing that Shariah governance and internal risk-sharing are in play. On the other side of the picture, in conventional banks, board size, CEO tenure, and financial performance become the significant determinants of NPLs reflecting the stronger connection between formal governance practices and credit risk outcomes. These results highlight the need for governing.

Table 5 (a) Random Effect vs Fixed Effect for Islamic Bank

Islamic Bank		
	Random	Fixed
	(1)	(1)
VARIABLES	Non-Performing Loan	Non-Performing Loan
Politically Connected Board Members Percentage	-1.337	-1.510
	(1.759)	(2.041)
Board Size	0.00514	0.0620
	(0.0588)	(0.0781)
CEO Tenure	0.0691	0.0758
	(0.0847)	(0.0754)
Board Independent	1.854	2.541
	(2.513)	(2.250)
Return On Asset	0.00580	0.0130
	(0.0194)	(0.0165)
Return On Equity	-0.164***	-0.156***
	(0.0414)	(0.0398)
Bank Size	-1.56e-07	6.05e-08
	(1.95e-07)	(1.81e-07)
Constant	5.750***	4.509***
	(1.220)	(1.327)
Observations	81	81
Number of Bank	9	9
r2	0.2142	0.1409
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

Table 5 (b) Random Effect vs Fixed Effect for Conventional Bank

Conventional Bank		
	Random	Fixed
	(1)	(1)
VARIABLES	Non-Performing Loan	Non-Performing Loan
Politically Connected Board Members Percentage	0.0332	-0.752
	(2.599)	(5.433)
Board Size	-0.543***	-0.597**
	(0.126)	(0.250)
CEO Tenure	-0.285**	-0.422**
	(0.134)	(0.176)
Board Independent	-0.986	9.070
	(4.157)	(6.897)
Return On Asset	-0.110	2.207
	(1.432)	(1.618)
Return On Equity	-0.410***	-0.441***
	(0.0658)	(0.0687)
Bank Size	3.55e-06	7.03e-06**
	(2.77e-06)	(3.11e-06)
Constant	17.70***	13.95***
	(2.537)	(4.373)
Observations	192	192
Number of Bank	20	20
r2	0.5793	0.4943
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

4.5 Hausman Test

The Hausman test has been used to determine the right panel model specification either Fixed Effects (FE) or Random Effects (RE) for both Islamic and conventional banks. The test checks if the differences between the coefficient estimates of FE and RE are systematic. The null hypothesis (H_0) states that the RE model is consistent and efficient while the alternative hypothesis (H_1) is in favor of the FE model.

For Islamic banks (Table 6(a)), the Hausman test was conducted on the coefficient of politically connected board members (PCP). The chi-square statistic turned out to be 0.07 with the p-value equal to 0.7980; hence, it can be concluded that there are no statistically significant differences between the FE and RE estimates. This finding favors the application of the Random Effects model for Islamic banks since RE produces efficient estimates without systematic bias in comparison to FE.

Table 6 (a) Hausman Test for Islamic Bank

```
. hausman fixed random
```

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) Std. err.
PCP	-.8192579	-.5601255	-.2591324	1.012513

```
                 b = Consistent under H0 and Ha; obtained from xtreg.
  B = Inconsistent under Ha, efficient under H0; obtained from xtreg.

Test of H0: Difference in coefficients not systematic

    chi2(1) = (b-B)'[(V_b-V_B)^(-1)](b-B)
            =   0.07
Prob > chi2 = 0.7980
```

In the case of conventional banks (Table 6(b)), the Hausman test used the PCP as the main focus again. The chi-square statistic is 0.25 with a p-value of 0.6165, which again indicates that there is no significant difference between the FE and RE coefficients. Thus, the Random Effects model is confirmed to be suitable for conventional banks, providing consistent and efficient parameter estimates.

Table 6 (b) Hausman Test for Conventional Bank

```
. hausman fixed random
```

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) Std. err.
PCP	6.924172	4.028051	2.896121	5.782192

```
                 b = Consistent under H0 and Ha; obtained from xtreg.
  B = Inconsistent under Ha, efficient under H0; obtained from xtreg.

Test of H0: Difference in coefficients not systematic

    chi2(1) = (b-B)'[(V_b-V_B)^(-1)](b-B)
            =   0.25
Prob > chi2 = 0.6165
```

The overall findings from the Hausman test suggest that the Random Effects model is appropriate for the Islamic and conventional banks analyzed in this research. These outcomes reinforce the previous RE regression results and offer a strong methodological basis for the following dynamic panel analysis through System-GMM.

4.6 Dynamic Panel (System GMM)

To effectively capture the changes in non-performing loans (NPLs), a System GMM technique was applied to both Islamic and conventional banks, while also tackling the possible problem of endogeneity related to the board characteristics. The GMM estimates which are controlled for NPL persistence, unobservable heterogeneity as well as the reverse causality between the governance variables and credit risk are shown in Tables 7(a) and 7(b). The Hansen test results verify the instruments used are valid as the p-values are almost 1 for Islamic banks and from 0.73 to 0.995 for conventional banks which means there is no evidence of over-identification.

In the case of Islamic banks, the coefficient of NPL lagged is positive and significant in one of the models (0.635, $p < 0.01$) meaning that the NPL levels are to a certain extent determined by defaulting loans in the past. The CEO tenure also gives a significant negative effect (–0.217, $p < 0.05$), which means that more seasoned management is a factor in getting better credit quality. The board size is mentioned in one specification, where it has a negative and significant coefficient (–0.334, $p < 0.01$), thus implying that the controlling functions by the larger boards are more effective. The Politically connected board members (PCP) and board independence (BI) are commonly insignificant, which indicates a very limited impact of conventional governance measures on NPLs in the Shariah-compliant institutions. Financial indicators such as ROA, ROE, and bank size are not consistently significant, implying that the internal risk-sharing mechanisms and Shariah governance are predominant in determining the level of credit risk.

The GMM results are quite revealing for conventional banks, indicating that there is a strong NPL persistence with the lagged NPL coefficients being very significant in all models (0.884–1.353, $p < 0.01$). It is observed that board independence is positively related to NPLs and this relationship is statistically significant in two models (36.86–45.62, $p < 0.05$), which might be a sign that independent directors only react to the worsening of credit quality instead of taking preventive measures. The other governance parameters—board size, CEO tenure, and political connections—are mostly insignificant, which implies that due to the adjustment of NPLs by the dynamic process, their influence is mostly overlooked. The financial factors, comprising ROA, ROE, and bank size, are mostly insignificant, thus placing the past NPL performance as the sole determinant of loan quality in the present.

To sum up, the System GMM results reveal significant similarities and differences between Islamic and conventional banks. In the case of Islamic banks, the tenure of the CEO and the size of the board play an important role in determining NPLs, whereas in the case of conventional banks, the factors like political connections and board independence play minor roles. In the case of traditional banks, NPL persistence is the dominant factor, board independence having a bit of an influence in a reactive manner, while other governance and financial factors have a minimal effect. These findings highlight the need to account for dynamic effects and model-specific mechanisms when carrying out the analysis of the relationship between board characteristics and NPL across different banking systems.

Table 7 (a) GMM Results for Islamic Bank

Islamic Bank			
	GMM	GMM	GMM
	(1)	(1)	(1)
VARIABLES	Non-Performing Loan	Non-Performing Loan	Non-Performing Loan
Non-Performing Loan	0.635***	0.00141	-1.860
	(0.216)	(0.0638)	(3.068)
Politically Connected Board Members Percentage	0.627	-17.65***	-6.255
	(2.152)	(6.387)	(25.95)
Board Size		-0.334***	-3.089
		(0.0300)	(5.886)
CEO Tenure		-0.217**	0.302
		(0.0849)	(0.862)
Board Independent		13.30	9.819
		(9.703)	(34.83)
Return On Asset			0.267
			(0.526)
Return On Equity			0.435
			(1.187)
Bank Size			-9.57e-07
			(2.24e-06)
Constant	1.512	11.15	54.33
	(1.303)		(79.47)
Observations	72	72	72
Number of Bank	9	9	9
Number of Instruments	21	24	27
Hansen test	0.99	1.00	1.00
Standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

Table 7 (b) GMM Results for Conventional Bank

Conventional Bank			
	GMM	GMM	GMM
	(1)	(1)	(1)
VARIABLES	Non-Performing Loan	Non-Performing Loan	Non-Performing Loan
Non-Performing Loan	1.353***	1.334***	0.884***
	(0.411)	(0.375)	(0.269)
Politically Connected Board Members Percentage	-26.32	-16.89	11.18
	(16.58)	(17.13)	(11.44)
Board Size		-0.0114	0.0593
		(0.562)	(0.378)
CEO Tenure		0.0767	-0.0231
		(0.446)	(0.214)
Board Independent		45.62**	36.86**
		(18.31)	(16.07)
Return On Asset			4.662
			(10.66)
Return On Equity			-0.360
			(0.387)
Bank Size			5.21e-06
			(5.20e-06)
Constant	5.204	-7.187	-12.40
	(5.232)	(7.222)	(12.12)
Observations	176	176	172
Number of Bank	20	20	20
Number of Instruments	26	29	32
Hansen test	0.80	0.73	0.995
Standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

5. Discussion

The results from the current study suggest that the characteristics of the board indicated through annual reports provide a certain level of insight into the performance of the banks in Bangladesh. Still, they only give a fragmentary and sometimes skewed representation of the actual governance to performance relationship. The overall pattern of relationships observed, though, can be traced back to the agency theory, resource dependence theory, and stakeholder theory; however, the explanatory strength of these disclosures is lessened by areas of non-reporting, selective reporting, and a lack of narrative depth that is not in line with the way the annual reports are prepared.

Overall, the size of the board was found to be positively associated with performance, which conforms to Rifat and Anjom (2024). At the same time, the presence of different significance levels also points to Noor et al. (2021) who claim that very large boards might cause a lack of coordination. This inconsistency points to one of the major drawbacks: the annual reports indicate the board size but do not shed light on the interactions among the board members or even if size is helpful in granting effective oversight. Therefore, the publicized numbers do not accurately depict the internal board dynamics, thus the reported structure is more than an actual governance practice by its inherent mismatch.

The independence of the board, on the other hand, appears to have a very strong connection with performance, as in the case of Maniruzzaman et al. (2024) and Hassan (2024). However, the annual reports only provide the structural indicators of the independence, listing the independent directors without explaining their involvement, influence, or the strength of their monitoring. So, on the one hand, there seems to be no problem with the documentation of independence, whereas on the other, the lack of qualitative detail does not allow for an understanding of how independence leads to performance. Thus, the annual report format conceals the important governance issues.

In the same way, the disclosures of board expertise, meeting frequency and CEO duality have been issued according to the resource dependence theory (Hassan, 2024; Hillman et al., 2009). However, the inconsistent significance across models reinforces the problem of limited disclosure depth. Annual reports provide a list of qualifications and count the meetings but do not explain how the expertise is used or how the meetings are adding to the strategic oversight. This exclusion leads to a disclosure gap in which there are numerical indicators but the underlying processes are invisible.

Bangladesh's annual report disclosure practices also reflect these mismatches. Research indicates that forward-looking and qualitative disclosures are very limited (Habib et al., 2025) and more than 70% of non-financial governance items are not included (Rahman et al., 2023). Such non-disclosures point to the fact that annual reports are not prepared in a manner that allows for the complete evaluation of governance effectiveness, leading to incomplete and sometimes biased reflections of board characteristics.

International evidence corroborates the necessity of both narrative depth and external assurance for the enhancement of the credibility and interpretative value of governance disclosures (Di Tullio et al., 2022; García-Sánchez et al., 2022; García-Sánchez et al., 2019). The lack of these two key elements in Bangladeshi annual reports aggravates the mismatch in disclosures. Without the support of proper narrative interpretation or external assurance, the submitted characteristics of the board seem to be just legally completed but devoid of the essential reliability.

To sum it up, the conclusions quite indisputably reveal that the annual reports provide little more than the most basic information about the board characteristics and the financial indicators, thus making it possible to carry out a very preliminary empirical analysis. Nevertheless, because of the non-existent narrative reporting, the qualitative details, the forward-looking information and the lack of external assurance, the annual reports only show the tiniest parts of the governance–performance relationship. The insufficiency and improper preparation of these reports limit their ability to accurately portray board influence. To overcome these shortcomings, the researchers and policymakers should supplement annual report data with richer qualitative sources and advocate for improved disclosure standards that coincide with the actual board behavior and the performance impact of the reported governance structures.

6. Conclusion

The objective of this research was to investigate if the annual reports are adequate to uncover the relationship between the characteristics of the board and the performance of banks in the banking sector of Bangladesh. Although the research identified all theoretically relevant indicators such as board size, independence, expertise, political connections, and CEO tenure that were consistent with the literature's recommendations, the empirical findings did not exhibit any strong or significant relationships. The weak statistical significance points out quite strongly that the problem lies not within the governance constructs but in the quality of disclosure or audit assurance in the annual reports. In other words, the current information available in annual reports is not detailed, credible, or consistent enough to indicate the true dynamics of governance.

The comparative findings between Islamic and conventional banks also give further support to this gap. While conventional banks did show some measurable associations between board attributes and performance, Islamic banks due to Shariah governance layers and more complex oversight structures displayed weaker and inconclusive outcomes. This difference suggests that annual reports do not highlight the most important governance processes, particularly those that are characteristic of Islamic banking. As such, the disclosures do not adequately communicate the extent to which board mechanisms lead to financial performance differences among various banking models.

In addition to it, the authors pointed out a few empty spaces in the research. Most of the previous academic works have only traced the connection between governance and performance but have never questioned the very quality and truthfulness of the reported data. The scenario that annual reports might leave out important board actions, confine to reporting only certain information, or give only short qualitative narratives has not been the subject of research at all. The study conducted calls for both disclosure adequacy and governance linkages and thus reveals a significant mismatch: the disclosure in the annual reports does not have the profundity that could explain the real performance results.

These findings are of great relevance. Banks have to overcome the problems of hushed, incomparable, and unreliable governance disclosures so that all concerned parties would be able to come up with an accurate assessment of the performance drivers. Meanwhile, regulators are to do their part by demanding and tightening audit standards and disclosure requirements, thus empowering the notion of transparency and consistency in the presentation of the vital governance elements—board effectiveness, committee functioning, director competency, and strategic oversight. Only then will annual reports cease to be deceiving or underplay the governance–performance relationship.

The research, however, is very valuable. One of the downsides of the research is the reliance on publicly available annual reports that limits the access to informal board dynamics and internal decision-making that are not disclosed but might be very powerful in performance. Reporting format differences and selective disclosure practices cause some of the banks to be hardly comparable at all. Future research should mix interviews, surveys, regulatory filings, or internal governance documents to check if the reported information matches the actual board activities. Cross-region studies could also indicate the effect of stronger disclosure norms on the governance effectiveness.

To put it differently, while annual reports are the most basic source available for the analysis of the board characteristics, they are not enough to uncover the actual relationship between board attributes and bank performance. The lack of significant empirical results indicates that the main problems are in the areas of disclosure gaps and audit quality weaknesses. Therefore, fortifying the governance reporting standards is a must, not only for the sake of transparency but also for the understanding of stakeholders and supporting sustainable performance in the banking sector of Bangladesh.

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