



Research article

Board Composition and Its Influence: The Role of Female and Independent Director in Promoting Financial Performance and CSR of Listed Banks and NBFIs

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ABSTRACT

Board diversity with the participation of women and independent directors is believed to be beneficial for ensuring greater firm performance and promoting corporate social responsibility (CSR), which safeguards the interests of all stakeholders. This study examines the impact of female and independent board members on organizational performance and CSR in the financial sector of Bangladesh. The insights from this study will empower firms to design more strategic and effective board structures, fostering improved financial performance and sturdier stakeholder relations. To comprehend study aims, financial data from 34 listed banks and 23 listed NBFIs in Bangladesh were analysed for the period FY2018–FY2022. Firm performance was measured based on return on assets (ROA) and Tobin's Q (TQ). The presence of independent directors provides mixed results in case of ROA and TQ. The study finds a meaningful negative impact of independent directors on ROA, while no significant relationship exists between board independence and TQ. Moreover, a gender diversified board has no noteworthy influence on the performance and CSR within the study context. These findings provide some recommendations to the firms to focus on strengthening board effectiveness by emphasizing expertise, engagement, and accountability rather than solely increasing diversity. Future research should explore additional factors, such as board engagement and governance quality, to better comprehend how board composition influences financial performance and CSR allocation.

Introduction

Board members intensely influence the performance of a firm, its stakeholders, and the society at large through their decisions. Considering the consequences of the board's decision, researchers emphasised instituting a high-performing board which safeguards both the firm's performance and stakeholders' interests (Garcia-Torea et al., 2016). In this case, studies revealed the significance of board composition, especially the participation of female and independent directors because their presence enhances corporate governance, accountability, and transparency, which minimizes unethical behaviour of the firm (Al-Okaily, 2024; Rakia et al., 2024; Fuzi et al., 2016). This study attempts to investigate whether the board composition of the listed banks and non-bank financial institutions (NBFIs) in Bangladesh effectively instituted such a board wherein the independent and female

members' contributions are connected with the firm's performance and CSR initiatives.

The inclusion of women in the corporate board and firm performance is a prominent and widely used research topic in business domain. Nowadays, as compared to the past, we have noticed a notable surge of women on the executive teams, which is thought to be a significant factor in encouraging involvement in business performance and engagement in CSR initiatives. Globally, women held about 15.3 percent positions on the board in 2015 as compared to 9.3 percent in 2009 (Lee et al., 2015), which hiked to 19.2 percent in 2021 (Goryunova & Madsen, 2024). Between 2009 and 2020, female directors accounted for only 9–12 percent of board seats in Bangladesh's commercial banks, reflecting continued underrepresentation (Karim et al., 2022). However, the important thing to note is that their representation is steadily increasing.

ARTICLE INFO

Article timeline:

Date of Submission:

12 June, 2024

Date of Acceptance:

22 July, 2025

Article available online:

28 July, 2025

Keywords:

Board Composition

Board structure

Board diversity

Board independence

Firm performance

Corporate social responsibility

*Corresponding author: amanedu.jobs@gmail.comDOI: <https://doi.org/10.53808/KUS.2025.22.02.1226-mb>

In addition, research shows that having female board members contributes to several constructive outcomes for the organization and its stakeholders. Diverse boards with female directors increase firm performance and enhance organisational image (Olaoye & Adewumi, 2020). Female directors have a higher risk-averse personality than male directors that is why they seem to have more risk-controlling skills (Schubert, 2006). Abdullah and Valentine (2009) demonstrated that females possess the attitude of generosity and universalism and it motivates firms to promote legal and ethical operations.

Independent directors can act independently to safeguard shareholders' interests because they enjoy no conflict of interest with management. The shareholders view the external directors as their representatives, and they are expected to speak up to minimize agency problems and keep management in check (Fuji et al., 2016). Moreover, independent directors are also recommended to improve corporate governance, openness, and social obligations (Fuji et al., 2016). Hence, given the existence of a favourable environment and their willingness to make some differences using their authority and competency, independent directors may boost firm performance and perform social responsibilities.

Besides the economic benefits, firms also are concerned about social and communal responsibilities. Setó-Pamies (2015) suggested that female directors help to behave sustainably, oversee the firm's social responsibilities, and promote CSR disclosure. Independent directors are also treated as more accountable to ethics as they are primarily appointed to uphold the goals of all parties, especially the general investors and external stakeholders. To maintain their positive image and mitigate information asymmetry, external directors are encouraged to disclose CSR data enthusiastically (Lim et al., 2007). Khan et al. (2013) also showed that independent directors substantially influence CSR efforts.

Research endeavours aimed at determining the correlation between gender profiling and corporate triumph came up with varying results. By investigating the Chinese-listed firms from the year 1999 to 2011, Liu et al. (2014) recommended that performance was favourably and significantly promoted by gender-diversified boards. Moreover, there is a greater beneficial influence on business performance from executive females than the independent females (Liu et al., 2014). This suggests that the executive effects dominate over the monitoring effects. Another study was conducted by Terjesen et al. (2016) to evaluate whether gender demographic improves the efficiency and independence of boards of directors using an empirical approach with 3,876 publicly traded firms across 47 different countries while considering a broad range of corporate governance policies. The result illustrated that more female board members had led to higher corporate returns. Furthermore, a study by Saha (2023) demonstrated that the overall percentage of female directors significantly improves a company's performance. Conversely, Amanullah (2021) suggested that female board members and organisational profitability are inversely related. In addition, using data from 2008 to 2012 from the listed firms of Borsa İstanbul, the securities exchange of Turkey, Bennouri et al. (2018) assessed the issue and concluded an inverse relationship.

Papangkorn et al. (2021) showed that a higher ratio of female board members improved the performance of firms during the Great Recession in 2008. However, such benefits did not exist beyond the crisis days (Papangkorn et al., 2019). According to Pasaribu (2017), there is little evidence linking the performance of a company with its female directors in a favourable manner. Within the context of European firms, there is a dual contribution to the existing literature. Firstly, whenever sexual profiling of the successors of CEOs was utilized as a proxy for exogenous variance in the appointment of female directors, female board representation meaningfully influenced firm performance. Secondly, this study focused on female participation on board as a stand-in for engagement in corporate governance (Green & Homroy, 2018).

Sobhan (2021) concluded that board size and diversity affect firm performance. However, board independence showed no significant impact on the firm performance. Awwad et al. (2023) also found that the financial performance and CSR disclosure are positively related to involvement of female members. Additionally, the percentage of women engaged in the board composition is relatively low in the companies. According to Pinheiro et al. (2023), female board representation improves the CSR performance. The findings also imply that women are more socially conscious and behave more socially in business.

However, Companies with a higher percentage of female independent directors usually participate in internal CSR more than external CSR (Jin et al., 2023). Moreover, the impact of having female independent directors on internal and external CSR is stronger; but, in case of independent directors with foreign experience on the same board, the effects are weaker (Jin et al., 2023).

Taking agency theory into consideration, outside directors mitigate conflict of interests between the organization's management and shareholders, which enhances business performance. (Kallamu, 2016; Jensen & Meckling, 1976). The monitoring characteristics of independent directors reduce the opportunity-seeking nature of managers and produce improved firm performance. Moreover, various financial frauds and misconducts will be mitigated for their regulating and monitoring role (Merendino & Melville, 2019). As stated by Volonte (2015), independent directors serve as an appropriate structure for surveillance thus they can reduce agency conflicts between shareholders and management and enhance firm performance. Previous studies provide mixed results concerning corporate profitability and independent directors' contribution. A board with more outside directors assists in accomplishing the wealth maximization goal of the company which ensures firm performance (Mishra, 2023). Fogel et al. (2021) and Terjesen et al. (2016) stated that firm performance is favourably associated with a higher percentage of independent members. Conversely, Mishra (2023) and Moussa (2019) found a negative rapport in this case.

Mishra (2023) investigated panel data from all Indian-listed firms from 2009 to 2019. The study concluded that firm performance was negatively related to the ratio of independent director; and this influence could not be mitigated even after their conflicting effects had been

removed. Furthermore, Amanullah (2021) used five accounting indicators to analyse data from listed chemical and pharmaceutical companies in Bangladesh between 2015 and 2020 to examine the connection between firm profitability and independent directors. According to the study's findings, independent directors primarily contributed positively and significantly to basic earning power (BEP). The remaining metrics including EPS, ROA and ROE remained insignificant.

In contrast, a few studies examine how independent and female directors influence CSR in Bangladesh, even though several studies have been carried out on measuring firm performance. The empirical research by Wang (2021) contributes to the literature on CSR and focuses on the significance of independent and female directors in influencing decisions about enhancing CSR reporting and reports that gender-diversified boards significantly influence CSR disclosures. According to Setó-Pamies (2015), female directors have an important role in improving the CSR and sustainable practices of firms. Muttakin et al. (2015) reported that large and profitable companies published more disclosures regarding CSR and external directorship was favourably correlated to CSR disclosures whereas female directorship was negatively related.

Even though several research and investigations had previously been carried out on the issue in the context of Bangladesh in different periods and different industries, existing research provides mixed results about the contribution of independent and female directors in strengthening CSR and company performance. While many researchers concluded with positive effects, some illustrated negative effects and others concluded with no meaningful effects. Even the results remain distinct for different industries. In addition, a firm's managerial decisions and societal engagements change continuously and so does the board profile, it is indispensable to measure the board's performance from time to time so that firms are aware of their decisional worth and board composition. Beyond numerous prior studies, there is a gap in understanding how governance mechanisms, particularly gender diversity and independent directors, influence both firm value and CSR disclosure across banks and non-bank financial institutions. Our study addresses this gap by offering a broader perspective on governance and its impact on financial performance and transparency. Therefore, the novelty of our research lies in its broader scope and distinct focus compared to prior studies. Whereas previous studies (Fariha et al., 2022; Hossain, 2020; Karim et al., 2024; Meah et al., 2021; Roy, 2022) have primarily focused on the banking industry of Bangladesh and produced various conflicting findings, our study offers a unique contribution by expanding the scope beyond the banking sector to include both banks and non-bank financial institutions. Additionally, while prior research has largely examined the relationship between board characteristics, audit committee attributes, and firm performance, our study introduces a broader perspective by investigating the impact of gender diversity and independent directors on both firm value and the disclosure of CSR issues. This dual focus on governance mechanisms and CSR disclosure sets our research apart, as existing studies have not explored these dimensions in

conjunction. Therefore, our study provides fresh insights into corporate governance and its role in shaping both financial performance and CSR transparency in Bangladesh's financial sector and will mitigate this research gap in the prevailing literature.

Supporting Theories and Hypotheses Development

Firm Performance

Firm performance is perceived as organizational effectiveness similar to productivity, conformity, and institutionalization (Henri, 2004). In general, the organizational performance and manufacturing of both goods and services, the operation of its various departments, the productivity of its employees, and the overall results of their employment are considered as firm performance. Most of the study determines firm performance either by accounting measurement tools, i.e., ROA or market value measurement tools, i.e., TQ (Fuzy et al., 2016). Taouab and Issor (2019) indicated three main elements to measure performance, which include productivity, flexibility, and adaptability. In general, firm performance means its organizational performance and manufacturing of both goods and services, the operation of its various departments, the productivity of its employees, and the overall results of their employment.

Corporate Social Responsibility

Nowadays consumers are more conscious about environmental sustainability and social welfare; thus, firms are more responsible for the preservation of nature and act sustainably. These mass concerns increased the necessity of CSR to a large extent (Amran et al., 2017). CSR is a relationship management concept which promotes a corporation to be considered socially responsible by the public, its stakeholders, and the corporation itself (Tamvada, 2020). Companies can be aware of their effect on the socio-economic and ecological aspects of society by participating in CSR initiatives. A socially responsible company must think about its dealers, suppliers, employees, community, as well as the society at large (Yevdokimova et al., 2019). Hence, social responsibilities are a significant identity of a firm's attitude where it deals with society to achieve the fundamental goals of the company. Therefore, CSR not only boosts the economy but also signifies a broader concern with business's duty and social obligation (Carroll & Shabana, 2010). Other authors illustrated CSR as a strategy for social responsiveness (Lim & Greenwood, 2017); as an exploration beyond legal and economic requirements (Weyzig, 2009); as a voluntary activity (Ho, 2013); and as a philosophy beyond profit-making (Isa, 2012). Akhter and Hassan (2024) considered CSR activities as a tool to improve the performance of firms instead of spending. In addition, Danh et al. (2024) showed CSR as a tool for enhancing firm performance.

Agency Theory

Agency theory covers the agency relationship in which persons individually or in group ("the principal") appoint another individual(s) ("the agent") to do specific tasks as their representative in accordance with a contract (Jensen & Meckling, 1976). The procedure involves allowing the agent the power of decision-making at a certain level.

Jensen and Meckling (1976) assert that the division of the corporate's shareholder and management leads to agency issues as, from their respective points of view, the two groups have different interests.

Stewardship Theory

Stewardship theory refers that individual is inherently interested to work by nature for others to execute his/her assigned duties and responsibilities. This theory assumes individuals as collective-minded and pro-organizational instead of being individualistic and they actually attempt to achieve societal, group, or organizational objectives as it enables them to feel more satisfied (Idowu et al., 2013). Therefore, stewardship theory gives a framework to explain the rationale behind managerial actions in numerous types of organisations. Muth and Donaldson (1998) argued that top-level managers are driven by numerous non-monetary motives besides monetary motives including an urge for achievement and acknowledgement, the psychological fulfilment that comes from performing well, commitment to authority, and an excellent work ethic.

Stakeholder Theory

Stakeholder is defined as a group or an individual who can influence or be influenced by the achievement of the objectives of the organisation. Several experts attempt to be more specific in describing stakeholders in various ways. For instance, subgroups of stakeholders such as shareholders, workers, and clients; voluntary and involuntary stakeholders; external and internal stakeholders; primary and secondary stakeholders etc. The main intention of these classifications is to highlight the existence of multiple stakeholder groups, each with distinct and perhaps contradictory expectations. Long-term firm performance extensively depends on the organisation's capacity to establish a satisfactory connection with these stakeholders (Virtanen, 2012).

Critical Mass Theory

The "critical mass theory" states a minimum quantity or threshold must be required for specific phenomena or transitions to take place or maintain (Wiley & Tormos, 2018). This theory is employed in various settings and definition may also be changed depending on the subject matter. The theory is employed widely within the framework of gender profile to describe the idea that if a workplace or boardroom is equipped with a specific threshold or critical mass of women or underrepresented genders, favourable results and cultural shifts may take place. As stated by this theory, an adequate number of individuals from diverse perspectives could influence an organisation's dynamics, decision-making procedures, and overall culture of the organisation (Jouber, 2022).

Board Composition: Gender and Independence

Board composition refers to the arrangement of the board of directors. In reality, a firm's shareholders appoint a group of people to the board, which monitors and controls the management of a business organization and the strategic plan. It includes information about committees, the number of directors, their responsibilities, and the process by which decisions are made. Women who occupy

the role of director in companies or organizations are known as female directors. Incorporating women on boards will promote innovation, enhanced corporate governance procedures, effective management monitoring and recommendations, and improved decision-making that help to improve financial performance and lesser risk of financial fraud (Joecks et al., 2023; Lara et al., 2017). Despite asserting mixed results related to financial performance, Balsam et al. (2021) conclude that female independent director improves corporate monitoring mechanisms.

An independent director is a person who belongs on the corporate board but does not participate in executive management, does not participate in regular business activities, and does not have a substantial affiliation to the business, especially which may influence the firm's managerial decision. The independence of these directors is regarded as a safeguard to minimize probable conflicts of interest as well as to assure the balance of power among the governing body. The entire efficiency and accountability of a firm's corporate body are improved by the supervision and advisory duties of independent directors.

Female Director and Firm Performance

Companies are concentrating to include women, especially at the top management level, as they recognize the need to take action in this area and as a reflection of the successful operations of firms. In order to keep a constructive relationship with female clients or consumers, certain businesses sometimes appoint female directors to their boards. According to Saggarr and Singh (2017), the firm profitability and the image of the boards are greatly enhanced by the involvement of female members. Khidmat et al. (2022) and Erhardt et al. (2003) assert that female board members contribute to enhance firm performance and institute corporate governance. Female directors can be classified into three subgroups: executive, non-executive and independent. Liu et al., (2014) concluded with positive relations between performance and the gender diversity. Boards with a diverse range of genders devote greater attention to monitoring that improves performance (Maji & Saha, 2021; Adams & Ferreira, 2009). Chatterjee and Nag (2023) found that there is no noticeable impact just by including women but their involvement by a larger percentage and their active participation in decision-making and supervision can favourably promote business performance and generate economic desirability.

Using the critical mass theory, Joecks et al. (2013) explained that having at least 30 percent female board members boosts firm performance. Three is recognised as the "magic" number that significantly affects the dynamics of female representation in boardrooms according to most researchers. Liu et al. (2014) specified a critical mass as of three or more women are more influential than by a firm with two or more women. Based on the critical mass theory, Brahma et al. (2021) indicated that if three or more women in the board than two or fewer, the results on firm performance are significantly higher. In addition, more representation of women enhances organizational innovation, which ensures market competitiveness and leads to operating more effectively in the long run (Torchia

et al., 2011). Lefley and Janeček (2024) have argued that as long as the gender gap exists in the organization's boardroom and society at large, critical mass theory remains relevant to distinguish the contribution of specific gender groups in making managerial decisions.

Researchers also referred to stakeholder theory to describe the interplay between female directorship and organisational performance (Najaf et al., 2024; Liu et al., 2020; Velte, 2017). Terjesen et al. (2016) asserted that women enhance the effectiveness of the board by integrating the interests of related stakeholders. Burke and Mattis (2000) illustrate that as female directors tend to be more knowledgeable about the needs of consumers, they know better about the market of the products or services of the firm. Besides, females cherish innovative leadership attitudes, they are more interested in the requirements of employees and other stakeholders that enhance the firm performance (Eagly et al., 2003). Adams and Ferreira (2009) argued that, with a proven attendance in the meetings, women generally engage in supervisory bodies more than males. Women's multiple leadership roles in organization also bring positive outcomes (La Rocca et al., 2023). A more diverse board like a gender-diversified board is expected to avoid dominating the process of decision-making of a single individual or a small number of individuals (Terjesen et al., 2009). Research also reveals that men, as compared to female, men are overconfident and are inclined to take greater risk, which consequently lifts financial risk for the firm (Huang & Kisgen, 2013). On the basis of dominant theories and most of the research, we propose the following hypothesis-

H1: The higher percentage of female directors positively affects firm performance.

Female Director and CSR

CSR helps to create organisational sustainability for corporate success by fulfilling the wishes of the external stakeholders and social groups (Tai & Chuang, 2014). Agency theory stated that minority and female board members significantly and favourably influence the charity contributions made by the companies (Wang & Coffey 1992). Improved CSR performance within a company is associated with an increased percentage of women (Zhang et al., 2013). A firm with a higher percentage of gender-balanced top management improves CSR performance and firms with female CEOs also reflect higher CSR performance (McGuinness et al., 2017). However, internal CSR initiatives have been significantly influenced by female directors among Chinese firms but their influence on external CSR remained insignificant (Ren et al., 2024). In this regard, representation of women in the board may not always bring meaningful CSR performance as it depends on several other organizational factors and women's power status in the board. Liu et al. (2020) infer that female director can bring substantial positive outcomes through CSR when they have intense power to make such decisions and the organisation has the impulse to engage in CSR. However, Le et al. (2024) inferred mixed findings that gender diversity and CSR were significant when measured by Tobin's Q but inconclusive when measured by ROA.

The stewardship theory supports the CSR initiatives of an organisation as CSR is linked to achieving

organizational performance by satisfying the concerned parties (Donaldson & Preston, 1995). In this case, women are more inclined to be a part of management and perform as stewards or guardians of the company's assets (Prihatiningtyas, 2012). Therefore, the stewardship theory suggests that gender demographics effect business performance because women go beyond the monetary needs to protect diverse stakeholders' claims (Prihatiningtyas, 2012). In addition, Gulzar et al. (2019) deployed the propositions of stewardship theory to investigate the change in CSR initiatives of Chinese firms and concluded that gender-mix was directly aligned to greater CSR change and more gender-diverse boards were inclined to better CSR initiatives and CSR reporting. From the overall theoretical and empirical evidence, the following hypothesis can be developed-

H2: Participation of greater proportion of female directors promotes CSR.

Independent Director and Firm Performance

Existing literature conducted on finding the effect of independent directors concerning organisational performance provides mixed findings. Generally, outside directors enhance performance in China (Liu et al., 2015). The higher percentage of outside director results in favourable firm performance (Arora & Soni, 2023). This increased firm performance may arise as independent directors assume their responsibility as an honour (Liu & Liu, 2023). Assuming that not all independent directors were going to be beneficial, Reguera-Alvarado and Bravo (2017) investigated two distinct features of independent directors: tenure and multiplication of directorships. The study concluded that short-tenured independent directors didn't improve firm performance and almost six years are required for the betterment of the firm performance. Moreover, the influence on the firm performance is not significant whenever independent directors participate on more than two boards at the same time.

Supporting agency theory, Pucheta-Martínez and Gallego-Álvarez (2020) concluded that firms tend to become wealthier faster when their boards comprise substantial outside directors. As the activities of management are regulated and overseen by independent directors, the self-interest of managers cannot be maximized at the expense of the shareholders' claim thus the agency problem between these two parties will be minimized (Reguera-Alvarado & Bravo, 2017). Agency theory illustrates that more effective and regulated management can be ensured through a larger participation of outside directors that will ensure effective internal control, reduce information asymmetry and provide business decisions to preserve the interest of shareholders (Pucheta-Martínez & Gallego-Álvarez, 2020). Considering the outcomes of earlier studies and the propositions made by agency theory, we suggest the following-

H3: Participation of greater percentage of independent directors in the board positive affects firm performance.

Independent Director and CSR

Various studies which have been conducted on how independent board members affect CSR initiatives

globally produce conflicting results. Cheng and Courtenay (2006) demonstrated that firms having more independent members voluntarily disclose information. Fernández-Gago et al. (2016) used listed Spanish firms from 2005-2010 indicating that independent directorship favourably enhances the implementation of communal activities. García-Sánchez and Martínez-Ferrero (2018) argued a meaningful link between CSR practices and the engagement of independent directors. In addition, Sharif and Rashid (2014) illustrated that the board will be effective if it includes outside directors or non-executive directors which means independent directors, thus the firm performance will be higher and also to a greater extent CSR disclosure. According to Bansal et al. (2018), CSR disclosure policies were negatively related to board independence. Chintrakarn et al. (2020) illustrated that the outside members exhibited a less approving attitude towards CSR activities.

Stewardship theory effectively articulates the responsibilities of independent directors and their effect on CSR initiatives. The theory indicates that external directors are inclined to work for the organisation and are collective-minded in nature regardless of fulfilling their personal interests and pursuing their job security; therefore, they will implement such strategies that will increase the firm value and enhance the image of the firm (Song et al., 2017). Thus, the practices of CSR are positively influenced by the outside directors' presence (Fernández-Gago et al., 2016). Moreover, according to the theory, stewards work to enhance and preserve the wealth of shareholders by improving the performance of the firm because they assume them as a part of the firm and the benefit of the firm as their own benefit (Sharif & Rashid, 2014). For this reason, a board with outside directors will be more effective, the company will perform better, and it will set the standard for high-level CSR initiatives (Sharif & Rashid, 2014). Based on the stewardship theory and related literature, we hypothesised the following-

H4: Participation of higher proportion of independent director promotes CSR

Conceptual Framework

In light of the mentioned theories, literature and proposed hypotheses, the following conceptual framework has been developed and tested to get scholarly insights (Figure 1).

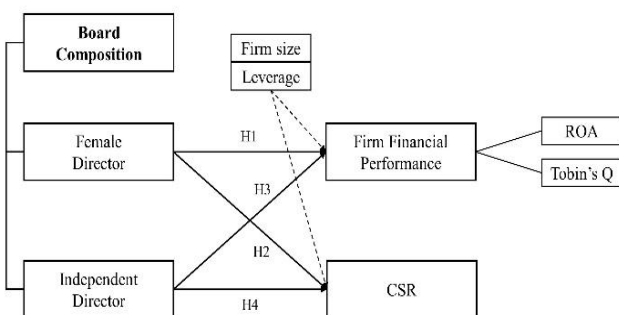


Figure 1: Conceptual framework

Materials and Methods

This quantitative study has been conducted using the data from the financial year (FY) 2018 to FY 2022 of banks and NBFIs which were listed in the stock exchanges of

Bangladesh in the specified period. Among the listed 36 banks and 23 NBFIs, we have considered 34 banks and all the NBFIs. A bank has been excluded from the study owing to the lack of financial data availability and the other is excluded considering as newly listed. However, due to the unavailability of CSR data in the publicly available reports of several NBFIs, the CSR data comprises 15 NBFIs along with 34 banks. Therefore, the study is carried out in 57 listed banks and NBFIs to measure firm performance, while excluding 8 NBFIs for unavailability of data related to CSR spending. Sampling mechanisms wasn't necessary to comprehend as all the organizations, with the exception of judgementally excluded 2 firms, are considered to carry out the study. Hence, the data is free from sampling errors or biases.

Table 1 describes the measurement methodology of the specified variables. To measure firm performance, we have considered return on assets (ROA), an accounting-driven performance metric, and Tobin's Q (TQ), a market-oriented performance metric, as the dependent variable. Researchers have widely used both ROA (Herciu & Şerban, 2018; Al-Matari et al., 2014) and TQ (Singh et al., 2018; Wolfe & Sauaia, 2003) in measuring financial performance. CSR is measured as the total amount spent by banks and NBFIs in different CSR activities. However, for convenience in analysis, we have used the natural logarithm of the CSR spending. To compute the independent variables, the year-specific proportions are converted to the average for final analysis. Besides, we have also considered two control variables—firm size and leverage—for minimising the issues related to endogeneity (Antonakis et al., 2014). Both of these control variables are extensively used in an organisation's performance measurements (Ali et al., 2022; Shibusse et al., 2019).

Table 1: Measurements of Variables

Variables	Measurements
<i>Dependent variables</i>	
ROA	Net profit divided by total assets
TQ	Addition of the Market value of equity shares (calculated on the closing day of respective year) and total liabilities divided by total assets
CSR	Natural logarithm of total amount spent for CSR
<i>Independent variables</i>	
Independent director (INDIR)	The ratio of total number of independent directors to total number of board members
Female director (FDIR)	The ratio of total number of female directors to total number of board members
<i>Control variables</i>	
Firm size (SIZE)	Natural logarithm of total assets
Leverage (LEV)	The ratio of total debt to total assets

Annual reports (from FY2018 to FY2022) of the selected banks and NBFIs were considered to gather study data. Additionally, market value of the equity shares was collected from Dhaka Stock Exchange PLC (DSE) database. As banks and NBFIs close their yearly books of accounts on December, the last trading day (normally 30 December) of the respective year was considered for determining year-end price of per unit equity share. Data

retrieved from the annual reports over the specified period were aggregated deploying statistical operations. Average data from FY 2018 to FY 2022 were then analysed using IBM-SPSS (version 25.0) and deploying ordinary least squares (OLS) regression, correlation coefficients and other descriptive measures.

Research Models

Considering the dependent, independent and control variables, we developed the following regression models and carried out our analysis accordingly:

$$ROA = \beta_0 + \beta_1 (INDIR) + \beta_2 (FDIR) + \beta_3 (SIZE) + \beta_4 (LEV) + \varepsilon \quad (1)$$

$$TQ = \beta_0 + \beta_1 (INDIR) + \beta_2 (FDIR) + \beta_3 (SIZE) + \beta_4 (LEV) + \varepsilon \quad (2)$$

$$CSR = \beta_0 + \beta_1 (INDIR) + \beta_2 (FDIR) + \beta_3 (SIZE) + \beta_4 (LEV) + \varepsilon \quad (3)$$

Here, β_0 represents intercept coefficient; β_i shows coefficient of respective variables, and ε presents error.

Results

Descriptive Statistics

The descriptive measurements—lowest, highest, average, and standard deviation—of the variables demonstrate that the average proportion of female directors was 13.5 per cent, while independent directors were 25.3 percent compared to the overall size of the board. The mean return on assets was negative (-0.013 with a standard deviation of 0.056), implying that, on average, the listed banks and

NBFIs generated negative net profit. The other results are presented in Table 2.

Table 2: Descriptive Statistics

Variables	Lowest	Highest	Average	Std. Deviation
ROA	-0.30	0.03	-0.013	0.056
TQ	0.07	2.88	1.087	0.379
CSR	2.00	9.52	6.879	2.201
FDIR	0.00	0.38	0.135	0.112
INDIR	0.00	0.86	0.253	0.173
SIZE	4.96	12.26	9.070	3.067
LEV	0.02	2.81	0.989	0.371

Correlation Coefficients

Table 3 represents the correlation coefficients (r) between the measured variables along with their level of significance. ROA is expressively interrelated with all the specified variables. While ROA and FDIR are positively correlated ($r = .280$; $p < .05$), ROA and INDIR ($r = -.372$; $p < .001$) are negatively correlated. TQ and CSR are insignificantly correlated with both FDIR and INDIR. Hence, the independent variables are better correlated with ROA but not with the other two dependent variables—TQ and CSR. Both the control variables are significantly correlated with ROA, TQ and CSR except for the CSR-LEV matrix. Table 3 illustrates detailed coefficients and their respective significance (p-values)

Table 3: Correlation coefficients between variables

	TQ	CSR	FDIR	INDIR	SIZE	LEV
ROA	-.684**	.304*	.280*	-.372**	.400**	-.739**
	<.001	.034	.035	.004	.002	<.001
TQ		-.312*	-.259	.149	-.324*	.971**
		.029	.051	.270	.014	<.001
CSR			.109	-.235	.964**	-.093
			.455	.104	<.001	.524

** Significant at the 0.01 and *significant at 0.05 level (2-tailed)

Regression Analysis

The model summary, presented in Table 4, illustrates that the proposed models can explain 66.8 per cent, 96.3 per cent and 93.9 per cent of the variations of the dependent variables: ROA ($R^2 = .668$), TQ ($R^2 = .963$) and CSR ($R^2 = .939$) respectively. The adjusted R^2 values also confirm the explanatory power of the model (.642, .960 and .933 respectively for model 1, model 2 and model 3). These adjustments indicate that the prescribed models are designed incorporating relevant variables, and not inflated by mere addition of superfluous variables. Hence, the data are in good fit concerning the proposed regression model to ascertain the independent variables' magnitude of influence over the dependent variables (Ozili, 2023).

Table 4: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
1	.817	.668	.642	.033
2	.981	.963	.960	.075
3	.969	.939	.933	.569

The OLS regression analysis results are shown in Table 5, Table 6 and Table 7 for the proposed models respectively. The tables contain both standardized and unstandardized coefficients (beta values) along with their significance measured by t-statistics and p-values. The study considers a minimum of 1.96 for t-statistics and a maximum of 0.05 for p-values as statistically significant results following the recommendation of Hair et al. (2019).

Table 5: Regression Results Measuring Firm Performance Using ROA

Model		Unstandardized Coefficients		Standardized Coefficients	t-statistic	p-value
		Beta	Std. Error	Beta		
1	Constant	.067	.024		2.738	.008
	FDIR	.032	.042	.064	0.772	.444
	INDIR	-.073	.027	-.225	-2.670	.010
	SIZE	.004	.002	.201	2.362	.022
	LEV	-.100	.013	-.658	-7.838	<.001

Table 6: Regression Results Measuring Firm Performance Using TQ

Model		Unstandardized Coefficients		Standardized Coefficients	t-statistic	p-value
		Beta	Std. Error	Beta		
2	Constant	.303	.055		5.557	<.001
	FDIR	-.016	.093	-.005	-0.176	.861
	INDIR	-.023	.062	.715	-0.367	.715
	SIZE	-.018	.004	-.147	-5.178	<.001
	LEV	.967	.029	.943	33.633	<.001

Table 7: Regression Results Measuring CSR

Model		Unstandardized Coefficients		Standardized Coefficients	t-statistic	p-value
		Beta	Std. Error	Beta		
3	Constant	.602	.446		1.349	.184
	FDIR	-.292	.750	-.015	-0.390	.699
	INDIR	-.512	.664	-.031	-0.771	.445
	SIZE	.735	.029	.960	25.039	<.001
	LEV	-.723	.359	-.081	-2.015	.050

Table 5 illustrates that INDIR has a substantial negative effect ($\beta = -.073$, $p < .05$) on firm performance as assessed using ROA. SIZE and LEV, the control variables of this study, are also significant in this case. While SIZE produces positive results ($\beta = .004$, $p < .05$), LEV has negative effect ($\beta = -.100$, $p < .001$). The model's intercept coefficient is also significantly positive ($\beta = .067$, $p < .05$). However, FDIR produces no meaningful result despite positive beta coefficients ($\beta = .032$, $p > .05$). Hence, firstly, the findings suggest that the financial performance declines with the increasing number of independent directors on the board of the listed banks and NBFIs in Bangladesh. Secondly, banks and NBFIs with greater amounts of assets perform better, while a greater debt-assets ratio restricts the organisational financial performance. Thirdly, the existing ratio of female members on board between the study periods produces no distinctive effect. Finally, the overall ROA-based performance is positive; therefore, it is supposed to increase if the said independent variables perform better. Table 6 presents the market-based measurement of banks and NBFIs' financial performance, measured using TQ. The results reveal that neither the female directors nor the independent directors influenced meaningfully in enhancing the market-oriented financial performance of listed banks and NBFIs of Bangladesh concerning TQ ($p > .05$ in both cases). However, the organisations have made significant positive performance ($\beta = .303$, $p < .001$) due to its leverage properties ($\beta = .967$, $p < .001$). Large-sized

banks and NBFIs perform the least in this instance because SIZE results in a strong negative coefficient ($\beta = -.018$, $p < .001$).

Table 7 specifies that no meaningful conclusion can be drawn in establishing the relationships concerning female directors' role in CSR spending and independent directors' role in CSR spending due to statistically insignificant results ($p > .05$ in both cases). Because SIZE is substantially positive ($\beta = .753$, $p < .001$) and LEV is strongly negative ($\beta = -.723$, $p < .05$), it can be inferred that Bangladesh's large banks and NBFIs participated more in CSR spending, whilst corporations with higher debt contributed the less. However, the overall model produces no significant impact on CSR; therefore, the industry's CSR contributions are not distinctively aligned to board structure concerning gender diversity and outside directors, or firms' size and leverage properties collectively.

The following table (Table 8) represents the hypothesis results and decision remarks. Among the proposed hypotheses, H3 produces significant negative results regarding ROA measurement ($t = -2.670$; $p < .05$). The other hypotheses are insignificant and negative, while FDIR and firm performance measured by ROA (H1) are positive but insignificant. Therefore, among the hypotheses, the study only supports H3 that the independent directors negatively contributed to the ROA based performance of Bangladeshi listed banks and NBFIs from FY2018 to FY2022.

Table 8: Hypothesis Testing Decision

Hypothesis	Independent variable	Dependent variable	t-statistic	p-value	Decision
H1	FDIR	ROA	.772	.444	Not supported
H1		TQ	-.176	.861	Not supported
H2		CSR	-.390	.699	Not supported
H3	INDIR	ROA	-2.670	.010	Supported
H3		TQ	-.367	.715	Not supported
H4		CSR	-.771	.445	Not supported

Discussion

Though different theoretical understandings including agency theory, stakeholder theory, stewardship theory and critical mass theory propose that the participation of female and independent directors is supposed to act in favour of organisational performance and CSR initiatives, studies suggest ambiguous findings. Therefore, the nature and size of impact are not universal and may differ in different economies, industries, firms and even in different periods. Due to the mixed findings in different economies and industries, it comes to the question of whether the presence of female and independent directors brings any substantial impact on firm performance and CSR allocation in Bangladeshi financial institutions. For this instance, this research investigates the data of listed banks and NBFIs of Bangladesh from FY2018 to FY2022 considering substantial literature gaps in the industry and in the timeframe.

The study results urge that outside directors need to focus on enhancing organisational performance or the organisation must ensure a favourable environment for the independent directors to perform for the organisation because currently they are playing significantly negative roles. In addition, the female directors' performance is in a grey area but there's a window of opportunity to perform as the beta coefficients are positive. To ensure greater performance concerning ROA, the banks and NBFIs have to maintain a more balanced debt-assets ratio. However, TQ result signifies different findings that current leverage properties are positively significant to firm performance. In this regard, organisations need to maintain the leverage proportion considering the significant results for both ROA and TQ.

However, based on the analysis, since they do not considerably or favourably impact the firm's performance or CSR appropriations, we do not advise businesses to decrease the proportion of female and independent board members. We are recommending unleashing the underlying causes for which the potentials of these directors are being restricted. Additionally, this investigation does not explore the influence of those board members in protecting stakeholders' interests, especially external stakeholders, defending ethical practices, serving society, introducing high-standard corporate governance, and so on progressive roles as stated in the literature.

As existing literature concludes substantial impact of female and independent directors in enhancing organisational performance (Hussain et al., 2024; Maji & Saha, 2021; Arora & Soni, 2023; Chen et al., 2018) and CSR (Alawi, 2024; Chang et al., 2024; Thosuwanchot & Lee, 2024), there must have some gaps in utilising the board's potentials in the listed banks and NBFIs of Bangladesh for which the results shows either negative or negligible association. As existing literature finds that female and independent directors substantially promote positive organizational performance and CSR, there must be some gaps in utilizing the board's potential in Bangladesh's listed banks and NBFIs, with results indicating either a negative or an inconclusive association.

Existing literature also produces conflicting outcomes. Higher ratio of independent directors negatively influences firm performance (Mishra, 2023). Additionally, Merendino and Melville (2019) discovered that having

more independent directors has an unfavourable impact on a firm's performance, whereas having fewer independent directors has a favourable impact. Furthermore, the results of Chintrakarn et al. (2021) demonstrate that independent directors have a negative perception of CSR investments. Saha (2023) asserts inconclusive relationship between female executive directors and firm's performance. Yang et al. (2019) also asserted that female representation on the board has a negative influence on company performance and risk. Ahmad et al. (2020) also aligned with our findings that the proportion of female directors appears to play an insignificant role in determining firm performance.

Conclusion

The corporate boardroom is the decision-making centre and operational unit of an organisation. Therefore, organizational performance and external affairs like CSR depend on the performance of the board. As the board structure and profile changes over time such as the actions, it is necessary to find out whether the board positively contributed to organizational performance and community relations through CSR. In addition, existing studies conclude inconclusive results in this case. For instance, this study focuses on investigating the association of outside and female members of the boards of listed banks and NBFIs of Bangladesh in relation to financial performance and CSR. The results of this study provide critical insights into the impact of independent and gender-diverse directors on the financial performance and CSR spending of banks and NBFIs in Bangladesh. The findings reveal that independent directors have a negative effect on ROA, while their influence on TQ remains insignificant. Similarly, gender diversity on boards does not significantly impact financial performance or CSR expenditures. These results suggest that outside and female directors either contribute negatively or have no meaningful effect on firm performance and CSR initiatives.

There may be various reasons behind these findings. The negative effect of independent directors on firm performance may be because of the lack of knowledgeable directors, lack of experience or specialized knowledge, limited scope of engagement in inducing decisions, or limits of devoting enough time to the firm, or alike. Besides, Wang et al. (2021) illustrated that independent directors perceive their primary responsibility is to minimize agency conflicts and to focus on maximizing the interests of the stakeholder that's why the voluntary mechanism like CSR disclosures is neglected or ignored several times.

The reasons behind the effect of board diversity on firm performance and CSR reporting may also be discussed. Firstly, firm may diversify the board with a lower portion of female directors only for required governance mechanisms and they are not strongly involved in the improvement process that leads to firm performance and in the decision making of CSR related activities (Abbadi et al., 2021). Besides, other reasons may also be influential in such case. CSR spending of the firm may be mostly influenced by external issues like pressure from political leaders or only just for seeking attention from media regardless of the presence of independent and female directors.

Given these findings, corporations should investigate the underlying reasons behind these outcomes and reassess their board structures to enhance overall effectiveness. Rather than focusing solely on increasing board diversity, firms should prioritize expertise, active engagement, and accountability to improve governance and decision-making. This study contributes to the literature by addressing gaps in understanding the relationship between board composition, firm performance, and CSR spending in the financial sector of Bangladesh.

Limitations and Scope for Further Research

Regardless of its significance, this study recognises a few shortcomings which posit for further research in the field. Firstly, the study only classified directors based on their gender and independence from management. Other factors such as their qualifications, experience in managerial decision-making, tenure of directorship to make a significant impact, quasi-appointments of favourable persons as directors by the management and so on factors are not investigated. Secondly, due to limitations in data availability of several banks and NBFIs, CSR is only assessed as the total amount spent within the specified period. It would be more insightful if segmented CSR initiatives were evaluated. Thirdly, the study considers only two control variables—size and leverage. Other variables, such as the debt-equity ratio, firm risk, growth, and firm age, may also affect the determination of the specified relationships. However, we have explored these

control variables to create a more comprehensive model, but including them compromises the model's effectiveness. For this reason, we settled on size and leverage only. Finally, the study considers the actual performances of banks and NBFIs; therefore, the results are inseparable from the possible impact of external factors.

To get more insights in the issue, future research may explore additional factors, such as board engagement and governance quality, to provide deeper insights into how board composition influences financial and CSR outcomes. Extensive research may also be advocated to consider both actual performance and external factors such as economic condition, savings and investment prospects, life expenditure and so on for a comprehensive understanding of the issue. By identifying and addressing potential constraints, corporations can work toward establishing high-performance boards that drive sustainable growth and value creation. Thus, the study will facilitate them to establish a high-performance board by eliminating the underlying restrictions.

Acknowledgement

We would like to express our sincere gratitude to our esteemed colleagues for encouraging us to engage in scholarly endeavors such as this study.

Competing Interest

The authors declare no conflict of interests.

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